NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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CALENDAR FOR JANUARY.

"The shutter closed, the lamp alight,
The faggot chopt and blazing bright,—
The farmer now, from labor free,
Dances his children on his knee;
While underneath his master's seat,
The tired dog lies in slumbers sweet."

IT IS within the memory of many of our readers, that in the course of the last forty years the *habits of farmers*, in the winter months, have materially changed, especially in their evening occupations. Better *schools of vice* could scarcely be devised by him who would see how rapidly and thoroughly he could contaminate the unsuspecting youth of country places, than those which were established, and most liberally supported, in nearly all the towns in New England, *in the village stores!*

The short day's work over, the cattle tied up and supper hastily swallowed, most of the males of the family hurried off to the stores; all had caught the mania, from the stripling of a few years, to the man bowed with age and whose locks had blossomed for the grave! Where the distance was thought to be too great for walking, the faithful old horse that had been hauling wood all day was hitched to the sleigh, and after leaving his freight, left to "bide the peltings of the pitiless storm," shiver in the cutting blast, or, haply, if the elements were kindly, nod over the dilapidated stone wall or rickety fence, now and then disturbed in his slumbers, pricking up his ears, and wondering at the uproarious mirth within, louder than the crash of the falling forest trees during the day in the woods.

These nightly gatherings contained all the elements of corruption; no man or boy returned to his roof-tree from them with unsullied purity. In their withering embraces his good principles were undermined, his moral sense blunted, and his affections weakened for those whose happiness ought to have been to him above all price. Those were times when it was fashionable to drink intoxicating liquors. The little tin, glass and gill cups, the half pints and pints, were in greater demand to portion out the burning fluid, than were the scales and measures to furnish the flour and oil, the sugar and coffee and tea, to supply the deserted board at home.

Drinking inflamed the passions, and these induced betting, gambling, and trials of personal prowess, which often ended in bloody noses, broken heads, and neighborhood quarrels, in which their wives and daughters were often involved. Such was the practice through much of New England for many years. Its consequences were plain all over the land. Unpainted and dilapidated houses and barns, straggling fences, tumbling walls, and lonely fields, half-starved and scurvy cattle, and ragged, unwashed and uneducated children, were its types. Husbands grew negligent in their personal appearance, and indifferent as to the world's estimation of them, and the poor wife and mother care-worn and disheartened, while mortgage after mortgage rested with overwhelming power upon the farm, until it became inevitable that the homestead must be abandoned, and they must seek somewhere else in the wide world a habitation (their *Home* they had lost) for themselves and their suffering little ones.

This terrible scourge to the land has been greatly alleviated, but not entirely done away; it will never be until the farmer comes to converse mostly of *things* instead of *persons*, and he can find profit and amusement in *books*, and pleasure in the bosom of his own family. But the great change that has taken place is encouraging. The fine dwellings upon thousands of our farms, especially the warm

and commodious barns, the better fences and finer stock, the fairer and more productive fields, together with the reclaimed lands, so long unsightly blotches on our own beautiful inheritance, all show that labor is more wisely directed, that the standard of morals has been elevated, and that *Home* and the domestic relations of life are more fully appreciated.

Everywhere there is a higher degree of intelligence and civilization. There are more good dwellings and farms—more comfortable chairs, more good beds, and more carpets on the floors of the poorer people. Thousands have rooms comfortably warmed, with stoves for cooking, that were formerly pinched with cold, and prepared their scanty meals over green fuel in huge stone or brick fire-places; so they have convenient kitchen utensils, where was to be seen scarcely more than an iron pot, a few articles of tin ware, and a few plates, of all sizes and colors, pewter, earthen and crockery.

Scarcely a house can be entered, however far away among or on the mountains, but what the schoolmaster, or his representative, may be found; the Atlas, Geography, Grammar, Arithmetic, National Reader, Philosophy, Algebra, besides Newspapers, Biographies, and something of the valuable literature of the day. A conversation with the sons and daughters soon shows that they have active and inquiring minds, which will not be satisfied that all things are right, *because* they have seen them done in a certain way.

We say, then, that there has been great progress, and that the last year has effected its full share. Can there be any better FARM WORK FOR JANUARY, for all of us, than to take a retrospect of the past, find encouragement in its teachings, and start on the new course with vigorous steps and determined will? We hold such a review to be *eminently practical*, as much so as to discourse of cattle and crops, meadows and manure, or pigs and poultry.

ACCOUNTS.—These are all settled for the year 1853, so that we have nothing more to say about them!

FUEL.—If the reader will peruse again the articles recently given upon fuel, he will see the unprofitableness of burning wood green, and the vexation which it causes in the family. Now is the time to get up the year's supply and prepare it for use.

TOOLS.—All cleansed, repaired, and ready for use? Some of them had not been painted for several years. "All done sir; step this way." Ah, neighbor CAREFUL, that is a sight which would have gladdened old JETHRO TULL'S heart. Not a bolt or wrench in a plow, not a tooth in a rake, nor a tine in a fork, is lacking. The demon of discord never disturbs your pillow.

Leave one good pitchfork and one rake about the barn floor for use, and place all the rest in the tool-room, if you desire to keep them whole through the winter.

ABOUT THE CATTLE.—AIKIN, in his calendar, observes of this time of year:—"The domestic cattle now require all the care and protection of the farmer. Sheep are often lost in the sudden storm by which the snow is drifted in the hollow, so as to bury them to a great depth beneath it; yet they have been known to survive many days in this situation. Cows with much ado scratch up a few mouthfuls of grain; but for their chief sustenance they must depend upon the hay and other provision of the farm-yard. Early lambs and calves are kept within doors, and tended with as much care as the farmer's own children."

"Now, Farmers, to your helpless charge be kind;
Baffle the raging year, and fill their pens
With food at will; lodge them below the storm,
And watch them strict; for, from the bellowing east,
In this dire season, oft the whirlwind's wing
Sweeps up the burthen of whole wintry plains
At one wide waft, and o'er the hapless flock,
Hid in the hollow of two neighboring hills,
The billowy tempest whelms; till upward urged,
The valley to a shining mountain swells,
Tipt with a wreath high curling in the sky."

Cattle will need salt, and a little clean ashes, occasionally mixed with salt put in the cut feed for horses, is excellent for them.

SHEEP.—They do not care so much for the cold, but they require a dry atmosphere, they should therefore, go out and in at will. They will be found in the clear and intensely cold nights lying on the trodden snow in preference to lying down in the barn; while in quite warm, but damp weather, they lie in the barn or under the sheds. Sheep require careful treatment and keeping as well as the other stock. An occasional feed of corn, beans, turnips, or carrots, with access to the branches of evergreens thrown into their yards, will bring them out in the spring with full fleeces and carcases, and large, vigorous lambs.

COLTS and STEERS, if carefully handled daily, will need no *breaking* of heads or limbs in order to make them work for you. Accustom them to the harness and yoke for weeks before you want their services, and when they understand what you want, they will do all they can cheerfully.

PEACH TREES may be headed down during the warmer days, while the heads of all the family may be most profitably *filled up* with useful knowledge, virtuous principles, and a sincere desire to make everybody about them *Happy through this New Year*.

A FINE PIECE OF BEEF.—Mr. REUBEN THOMPSON, one of our old subscribers, of Plympton, Mass., deposited on Thursday, one of the finest fat beeves in the stall of Messrs. Holden, Bullard & Co., Quincy Market, that we have seen for many a

day. It was not large, but so mingled and stratified with the delicious fat and lean, as to make even an alderman's mouth water. The ox took the first premium at the late Exhibition of fat cattle in Plymouth county.

THE NEW YEAR.

The last year has been one of great agricultural prosperity throughout our favored land, and one, we confidently believe, of much *progress* in the Art. Mind, among the farmers, has had more thought for the causes and reasons of things, than ever before, and it promises to be still more active and inquisitive in the future.

With regard to ourselves, we intend to keep a steady draft in the old harness; attentively gathering up for your pleasure or profit, whatever seems of permanent value.

Our correspondents have been able and obliging. We are happy of the opportunity to tender them our congratulations, and express our obligations, and the hope that our personal relations may be more intimate. No important changes in the management of the paper are contemplated.

During most of the past year, the time and attention of both the *Publishers* has been greatly occupied in building, laying out grounds, and fitting up recently purchased estates. This, with our being obliged to move to make room for the Mechanics' Fair, has necessarily interrupted our operations somewhat. Yet the interests of the *Farmer* have gradually advanced, and new readers have been added from nearly every section of the country. We only need prompt payments from all to enable us to say that we are encouraged "on every side."

To each and all, we wish a prosperous and happy year.

For the New England Farmer.

WASTE OF URINE.

Mr. Editor:—Having for years been of the opinion that the farmer's greatest loss in fertilizing substances, is in the almost entire waste of urine from all animals, I was much gratified by finding in the report of the Commissioner of Patents for 1851, House Doc. 102, pages 380 and 381 of said report, an article gathered from the great London exhibition, on the subject of the use of urine compounded with plaster, &c., and making what is there called *urate*. From that suggestion, I proceeded last March to save what urine I conveniently could, and at the time of planting corn, selected ½ an acre of land for the experiment, in a lean state of fertility; this land had been manured seven years since; the next year seeded to grass with oats; then in grass four years, and in oats last year. I prepared a compound, which for brevity I will call urate, in this manner: To the urine, which had become putrid, I added 325 lbs. of ground plaster in its raw state, about 3½ bushels of house ashes, and enough common sand, about four bushels, to reduce it to a state of dryness convenient to be sown broadcast over the ½ acre of land, which was done as evenly as possible, and thoroughly harrowed in, leaving sufficient of the urate to put about one spoonful in the hill at planting.

The crop was small and light, as was anticipated; but the corn at all times through the season, until ripened, exhibited a luxuriant green and apparent healthiness uncommon for so small a growth. I have no douht the preparation would be of great utility on land in a good state of fertility, for a crop of corn.

Having a small quantity of the urate left, I used it in planting potatoes, where the effect was more gratifying. A piece of old mowing, broke up the fall before, thoroughly harrowed, and marked out with a plough for manuring in the hill, was selected for its application. We applied about ½ to ½ of a fair shovelful of good manure to the hill, in the midst of which one row was left, and about a heaped table spoonful, or perhaps ½ a gill of the urate applied to each hill; the yield exceeded that of the manured land by several pounds in a row of 75 or 80 hills.

In another part of the same field the experiment was carried still further. In the following, the rows were all side by side, of equal length, and no manure, except the application mentioned, was used:—

ROWS FIFTY-FOUR HILLS IN LENGTH.

	Planted.	Produce, large size.	Do. small size.	Total produce.
	Lbs.	*Lbs.*	*Lbs.*	*Lbs.*
1. Potatoes, common or middling size, no manure of any kind, weight about one-fourth pound	14	32½	9½	42
2. Do., common or middling sized, spoon full urate	14	94½	9½	104
[*Plaster and Ashes applied after hoeing first time.*]				
One large potato in hill, weight	27	93½	14½	107½
Two small potatoes to the hill	10	68½	12	80½
One small potato to the hill	5½	62½	6½	69
One-half large potato in hill	13	78	10	88

The next row was planted with middling sized potatoes; in yield much like the last weighed; the rain prevented our weighing them at the time.

From the foregoing it will appear that the urate, or some other cause, produced in fifty-four hills, 62 lbs. more than the same number without any application at all, but the bare soil.

Piermont, N. H., Dec., 1853. Grafton.

Remarks.—A model communication, friend Grafton, and we hope it may be succeeded by others as practical as this.

A GOOD EXAMPLE.

The *Granite Farmer* states that at a recent meeting of the Executive committee of the Hillsborough County (N. H.) Agricultural Society, it was voted to hold five monthly meetings of the society the ensuing year, viz.: at New Ipswich, the last Thursday in December; at Amherst—the semi-annual meeting—the last Thursday in January; at Brookline, the last Thursday in February; at Woodbury Village, Antrim, the last Thursday in March. The time and place of the remaining meeting to be hereafter designated

For the New England Farmer.

DRAINING.

The question has often been advanced, and as often responded to, in various forms, in the columns of the *Farmer* and elsewhere, "What does the agriculturist most essentially want in order to promote the best interests of his vocation?" and it is a very frequent observation that he wants more scientific knowledge, and better information as to the best modes of farming, &c. But it appears to me that a great many know a "leetle mite better" about these things than they pretend. At any rate, I think there are a great many of the agricultural implements now in use, and some ways of working, that "*can't be beat;*" as the old man said when he pulled up a carrot. But then again, in order to view the statute of truth with some correctness, we must walk all round it. On the other hand, there are some operations carried on in a style that seems about as ridiculous as plowing with the horses hauling by the tail. This is applicable, in most instances, to the system of thorough draining which has come under observation "*Down East.*" Perhaps the method is a little better "*Out West,*" but I am inclined to believe that you, too, want some modification in that particular; and as I have had some experience in draining, I shall just lay before you some brief observations on the subject in my own blunt way.

This very important and most essential operation has been carried on to some extent by the farmers around the suburbs of the little city of Calais, Me., and St. Stephens, N.B., and an outline of the drains there will serve as a description of most I have seen in other parts of the country. They are opened about 3½ feet wide at the top, and vary in width at the bottom, from 2 or 2½ feet to 1 foot, and are from 2½ to 3½ feet in depth, being from two rods to a greater distance apart. They are filled with stones to within a foot or 15 inches of the surface, for the most part, some with culverting and some without. The large drains are calculated as receptacles for the *muckle stanes*. Now I predict that drains of this description will not be long in getting choked up, and will ultimately become of little service in any country, particularly in these parts, where the action of the frost is so penetrating, and renders the soil of a pliable texture, so that it is easily washed away or run down when a heavy rain-storm descends.

Vermin are also most likely to seek a rendezvous in such drains, making holes from the surface down to the stones, which gives the water a greater chance for the work of destruction, and besides they are far more expensive than drains of a more serviceable and permanent nature.

When drains are intended to be filled with stones, they ought to be ruled or lined on the surface not more than 15 inches wide, and dug out to the depth of three feet. The bottom and side should be left as clean as the nature of the ground will admit, and then filled with clean small cobble-stones to the depth of not more than 12 inches, with a neat small culvert. They should be nicely levelled on the top, and have a covering of straw or bush, then be filled in as soon after as possible. Drains of this description will answer the purpose in most land, 36 feet apart. The leading or main drains will require to be proportionate in their dimensions and construction to the extent of their tributaries, or of the run of water that may be expected to flow into them. They should in all cases, however, be not less than three inches deeper than the others.

Drains 18 feet apart, and 27 inches deep, taken out in the bottom with a narrow spade, and cleaned as for tile, with six inches of beach or small stones, will answer; but when tile can be procured at a reasonable rate, they are superior to stones or anything else. The best kind of tile for tributaries, are those of a semi-circular form, 4 inches wide and 14 inches long, open on the base. It has been recommended that they should be perforated with holes to admit the water; but they should have no holes; they are better without them, and the closer they can be laid to each other the better. Soles in all cases should be dispensed with except in soft places, where they are absolutely necessary. Tiles cannot be laid so snugly on soles, besides, they are apt to be shifted or misplaced, or even broken by any pressure from above. The best covering above them is the top soil free from stones. A little straw might be used, but any stone or bush is apt to do more harm than good. There are many farmers who think that they must make a chance for the surface water to get in, but there is a great mistake in this matter. The surface water will get in fast enough. It must be borne in mind that plants derive most of their nourishment from water, even more than is generally supposed. This has been clearly demonstrated by placing a vessel filled with earth away from the surface of the ground, and raising a plant in it by watering it. The plant when grown may be as heavy as the whole earth in which it was raised; and yet it is found on being removed that the earth will weigh as heavy as when first put in. The conclusion is that the plant has received the elements of its construction from the water and the atmosphere.

Accordingly when the water is admitted too freely, besides being injurious to the drain, it may run off without leaving its fertilizing and nourishing elements in the soil.

Again, it has been doubted by some whether a great portion of the high land in these parts can be benefited by draining. They allege that it is already too dry, &c; but it should be borne in mind that drying is not the only object to be attained by draining. I have seen even comparatively dry land materially benefited thereby, so much so, indeed, that the crops on it were far less liable to be injured by the drought than before. Why, sir, there are some of the best farmers in Scotland, so enthusiastic in this, that they have the tiles plastered up at the joining with wrought clay, and that even when the drains are 3 feet deep, to prevent the water from getting in too fast.

But again I would say, let those who have any doubt about the accuracy or gospel of these statements, or I would invite any one, to put the thing to the test by actual experiment. Let them try the garden. Let them open the drains, 27 inches deep and 18 feet apart, or from that to 36 inches deep and 36 feet apart, according as they think will best suit the nature of the ground; and as the price of tiles, (according to the advertisements which have appeared in your journal) is beyond the reach of farmers of common means, let a suitable conduit be made, of some wooden construction. Wood will last a long time in a drain, certain kinds of it at least. There are some parts in

Scotland where wood has been used very extensively for drains. Nor is that the only material that has been used there. In clayey land I have seen black thorn-bushes used exclusively. Also furze, (whin,) heather, &c., and even tough-top sod, all to good purpose.

But, to conclude, I would just remark farther, that there are certain wet lands which are consequently cold and sour, where draining may not be of much apparent benefit the first season; there being certain peculiar elements lying dormant which I cannot scientifically describe, that are brought into action by the operation of draining which it takes some time to accomplish, and which may require the assistance of a sprinkling of lime, a little manure, (about half the usual quantity,) and some extra *stirring*, (subsoiling,) and then—Mr. Brown, what do you say!

There is much that might be brought forward on the theory of draining, and its advantages; possibly I may take up the subject another time.

Harvey, York Co, N.B., Dec. 6, 1853. J. T.

PRACTICAL HINTS IN SHEEP HUSBANDRY.

Mr. Editor:—Allow me, through your valuable journal, to reply to a few questions often put to us by young wool growers.

Fouls or Foot Rot.

Is it curable, and by what process? Experience affirms that it can be cured effectively by the following method. 1st. Pare and scrape the hoof most throughly, ridding it of all offensive matter by means of a sharp knife. 2d. Then apply a strong decoction of tobacco, in which has been dissolved as much blue vitriol (pulverized,) as will dissolve, to which is added a small portion spirits turpentine. The vitriol is a caustic—the tobacco is healing—and the turpentine is penetrating. In slight affections two applications, five or six days apart, will effect a cure. In severe cases it must be followed up for a few weeks. I have known sheep that walked on their fore-knees, not being able to touch their fore-feet to the ground, completely cured by this remedy. Remember that the knife performs an essential part in the cure; use it thoroughly. Butter of antimony, lime, alum, white lead, vitriol and other caustics have been used and failed. The *tobacco* is needed to heal.

Sheds for Sheep.

Do sheep require housing in the winter month? Most certainly; no domestic animal needs it more and none gives better returns for the outlay. *Especially is this true* in Ohio, and other Western States, where the winters are open and rainy, and the weather very changeable. Let a flock of sheep be once thoroughly drenched with rain and sleet, and then exposed for fifteen hours to a northwest blast, which freezes the fleece around them, and consumption and death will mark many a victim, and ere spring, greatly enhance the amount of crow-bate upon the farm.

Said an enterprising wool-grower of Vermont in our hearing the other day, "I would not have my flock of 600 sheep once thoroughly wet to the hide in winter for $50. Rather than suffer it, I would shut them up 36 hours without food or drink." The advantages of housing are manifold. 1st. A large per centage of deaths are avoided. 2d. Much less food is consumed. 3d. A much heavier and better fleece is obtained. 4th. The flock comes through the winter in a much finer and healthier condition. 5th. The lambs are more vigorous and likely to live. In short, reason, economy and humanity, all conspire to teach the important lesson—*provide suitable stables for your sheep*. And he who can and will not do it, ought himself to sleep bare-footed and alone, on a couch of straw, with open windows and under a leaky roof, where the winds go piping and careering through every crack of his cabin, for six months at least, until he shall have learned to sympathize with the dumb beasts God has committed to his care and keeping.

Tups—How Treated.

November is the month for coupling the ewe and sire. As five months usually intervene between conception and delivery, every flock-master can decide for himself how early to have his lambs make their appearance. Ohio can adopt a period 3 or 4 weeks earlier than Vermont. The buck should be kept up to generous feed during the tuping season, and allowed to serve from 8 to 12 ewes per day only. One leap is considered sufficient, and the ewes served should be taken from the flock and placed in another field. In 12 or 15 days, a flock of 150 ewes can be served by one buck, with less injury to himself than he would feel by being turned out to run with 60 ewes. Again his lambs come more vigorous and healthy, from the fact that they were begotten when the sire was in proper trim. After the flock has all been served, turn the buck and ewes together for a few days, to ensure service to any delinquents.

Salt in Winter.

Place a box in the shed, in a secure place, where only one sheep can approach it at a time. Fill this with 6 or 8 quarts of salt, and it will be found that the flock will partake of it in such quantities, and at such times as nature directs. When the box is emptied, fill again.

Do Sheep Need Water in Winter!

They do, most certainly. A Dutchman of my acquaintance once shut up a flock of sheep and fed them on dry hay and corn with no water. Within six weeks several died. A post mortem examination came to the very correct conclusion that they died of thirst. His only excuse was, when interrogated on the subject, that "he *supposed* sheep would live without water!" His supposition was a costly one, and taught him an important lesson. He remembers it to the present time. The fluids of the system must be supplied. Hence, water is highly necessary to the well being of the flock.

Grain—Its Utility—Which is Best.

The kind and amount of grain fed to a flock of sheep, will be regulated wholly by the object in view. For mutton purposes, corn is the best, because its properties are to lay on fat. If growth of carcass be the object, as it should be with lambs from 4 to 12 months of age, then oats, peas and beans are the best grains, as their properties are to favor the growth of bone and muscle. If wool be the main object, then wheat and rye, peas and beans are the best, as they contain a larger per centage of the constituent properties of wool, than other grains and directly promote the wool

secretions. Breeding ewes may be kept in too high condition to bring a healthy and vigorous lamb. The error is usually on the other side. Sheep that are kept up in close winter quarters for five months, not being permitted to roam in the fields, greatly feel the need of succulent food. Beets, carrots, turnips and bran, or mill-feed, are fine substitutes for winter pasture.

If these hints shall aid any one in swelling the *increase* of the American flocks, which have been on a stand-still for eight years—owing in part to the vast numbers that are annually consumed by this meat-eating nation—our object will be attained. S. B. ROCKWELL.

—*Wool Grower.*

THE FOREST TREES.

BY ELIZA COOK.

Up with your heads, ye sylvan lords,
Wave proudly in the breeze,
For our cradle bands and coffin boards
Must come from the forest trees.

We bless ye for your summer shade,
When our weak limbs toil and tire;
Our thanks are due for your winter aid,
When we pile the bright log fire.

O, where would be our rule on the sea,
And the fame of the sailor band,
Were it not for the oak and cloud-crowned pine
That sprung on the quiet land?

When the ribs and masts of the good ship live,
And weather the gale with ease,
Take his glass from the tar who will not give
A health to the forest trees.

Ye lend to life its earliest joy,
And wait on its latest page;
In the circling hoop for the rosy boy,
And the easy chair for age.

The old man totters on his way,
With footsteps short and slow;
But without the stick for his help and stay,
Not a yard's length could he go.

The hazel twig in the stripling's hand
Hath magic power to please;
And the trusty staff and slender wand
Are plucked from the forest trees.

COLDS IN SHEEP.

These animals are not unfrequently affected with colds and coughs during the winter season, attended with mucous discharges, or a running at the nose. The best and most effectual remedy with which we are acquainted, are the spines and boughs of the white and yellow pine and hemlock, and common tar. The latter should be rubbed over their noses, which may be easily and effectually accomplished by spreading it on a board, and sprinkling salt over it. The animals will devour the tar with the salt, and not with so much care as to prevent their noses from becoming pretty well smeared with it. Careful attention and liberal keep will strengthen sheep, and greatly assist them in bearing up against this disease.

After sheep have been kept on dry fodder several weeks, they highly relish green or succulen, food. If they are confined to the yard, scatter over it the evergreens mentioned above, and they will be found to leave the best timothy or clover, and feed on the pine and hemlock leaves. Turnips, beets, or carrots chopt, and fed to sheep, tend to keep them strong and in a healthy condition, and there is nothing lost to the farmer in feeding these and occasionally a few beans or a little corn. They yield more wool, and larger and stronger lambs, under such treatment, and afford more profit than if scantily fed.

For the New England Farmer.

PREPARATION AND APPLICATION OF MANURES.

MR. EDITOR:—If there be any *one* subject that demands the attention of the Massachusetts farmer more than any *other*, it is, "*the preparation and application of manures;*" the means whereby the recuperative energies of the soil can be restored. We have no lands on which crops can be grown year after year, without the application of fertilizing ingredients. Animal manures, are the first for this purpose—but their quantity is so limited under ordinary circumstances, as to furnish only a small part of the needed supply. With the best economy in the preservation of the materials found in or under the stable of the cattle, or in the pen of the swine, it will not be practicable to make more than *one-third part*, as much manure as is needed upon the farm. How shall the other *two-thirds* be supplied? This is the question. For those lands situate on the borders of the ocean, as are many farms in the counties of Essex, Plymouth and Barnstable, the best resource is the material thrown upon the beach, and on the rocks along the shores; where these materials can be had, there need be no want of manures. Another rich and valuable supply is found in the muscle beds, and on the flats along the shore. For many purposes, the very best of fertilizing materials may thus be obtained. Hundreds and thousands of loads of mud and muscle bed are gathered every year, in the county of Essex, and spread by means of railroad conveyances in all the towns between the Merrimac and the sea. I have myself procured a supply of muscle bed, to be sent to Andover, to an intelligent cultivator of vegetables there—who was much pleased with the article—and found his benefit in procuring it; as will every man, who has a young orchard of apple trees, that he wishes to keep in thrifty bearing condition. No better application can be made when properly applied, and on ground properly managed. I have again and again seen its benefits; and therefore speak of it with confidence. But the source of fertilizing material to be relied on more than all others, is the *bogs* and *swamps* every where to be found. Here are the rich materials gathered for centuries, washed from the adjoining hills, waiting to be restored to their original position. The wonder is, that so much of the richness of the soil remains on these hills; one would suppose it would all have been washed into the valleys. Still, there is found, on steep declivities, much of fertility. How *to gather* and how *to compost* the materials found in the swamps and meadows, should be the grand study of the farmer.

Here let it be remarked, all mud is not alike—some needs to be managed in one way, some in another; some can be beneficially applied to the up

land, in the state in which it is first dug—and good crops are the consequence. Other parcels will be benefited by being exposed and frozen, and thus pulverized. Every kind of mud can be advantageously deposited in the barn-yard, the barn-cellar and in the pig-pen, and these mingled with an equal quantity of other material—whereby the quantity of manure on the farm will be doubled.

Of late much is said about the *concentrated essence of manures*, such as the phosphates, guano, poudrette and the advantages to accrue from *the analyses of soil*, whereby the deficiencies and superabundancies, in the constituents of soils, can be distinctly pointed out. Without doubt, by the aid of chemical science, many improvements may be made. But our farmers generally are not chemists, nor may we expect them to be; and however clearly these things may be demonstrated, the greater part of cultivation will still go on, as heretofore,—especially while the doctors themselves disagree so much in their prescriptions, and the mode of their operation. One will tell you that *an ounce* of a *certain phosphate*, applied to a square rod of land, is sufficient to ensure a full crop of wheat upon the land;—and without such applications no wheat can be grown; and this fact he will assure you, can be made certain, by a careful analysis of the soil. This may be so—but I have little confidence in such prescriptions. I believe it will be found like many of the highly sublimated notions relating to certain phosphates, put forth, with much assurance by those who profess to know.

These pompous assurances bring to mind an anecdote that occurred many years since, while my grandfather and his neighbor Marble were travelling in the county of Merrimac, N. H., where a farmer was planting his corn, on a pine plain, *without any manure*. My grandfather said to him, "My friend! how much corn do you expect to get to the acre, in the manner you are cultivating it?" He replied, "With the blessing of God, we may get ten or fifteen bushels to the acre." His rough companion by his side made answer, "Give me a good shovel-full of dung in the hill, this is the best blessing I want." Now sir, give me a good shovel full of dung properly applied to each hill of corn, and I will value it more with the blessing of God than all the phosphates prepared by all the chemists in creation. J. W. P.

December 15th, 1853.

TOO MUCH STOCK.

We should never keep more stock on our farms than we have the means of keeping well. One animal properly cared for, and liberally tended, is worth more than two poorly kept. It is a strange but common error in rural economy, to appropriate to two, or perhaps three animals, the food which is barely sufficient to sustain one.—This singular error is often adopted by the farmers of an entire town; consequently there is little or no good stock to be found, and the profits resulting from stock-keeping and raising are greatly diminished, while the price of keeping of all kinds is, as a necessary and inevitable result, ruinously high.

Every farmer should keep just sufficient stock economically to consume the keep his fields produce, and no more.

He should select the best animals to propagate from, and dispose of the poorest. "Breeding-in-and-in" should be cautiously avoided, and the greatest care taken to prevent deterioration by the introduction of inferior animals, whether native or foreign.

CHRONICLES OF A CLAY FARM.

This is a capital book—reprinted from the English by Danforth, Hawley & Co., of Buffalo. It has an American Introduction and Notes, by Lewis F. Allen, of Buffalo, N. Y., a gentleman of great agricultural experience, and one of our best writers on the subject. The work describes the process of draining and reclaiming some of the wet, clay lands in England. This is done in such a lively and attractive style that to read it will afford a treat to the scholar as well as the farmer and the general reader: The American Editor says:

"The clear, vigorous, racy style in which its thoughts are clothed will attract the man of taste, while the sound and practical truths which are set forth will arrest the attention of all who feel an interest in their several subjects. They describe the process by which the most forbidding surfaces of swamp and bog land, (leaving out the wide fenlands, like those of Lincoln and Cambridgeshires,) by a moderate outlay of capital, may be turned into productive fields, teaming with agricultural wealth—a labor of the past century, in which the landholders and farmers of England and Scotland have been engaged, and in the results of which their agricultural products have been quadrupled, their population trebled, and now enjoying more of the comforts and the luxuries of life than at any former period."

Below are a few extracts:

FINISH THOROUGHLY WHERE YOU BEGIN.

"Your experience and mine will differ very much if you do not find more expense, and more regret, left behind invariably by an *under*-done than by an *over*-done job. 'The first expense is the least' in agriculture—and in every thing else perhaps, with the old exceptions of Law and Matrimony."

OPPOSITION TO PROGRESS.

"No sooner had the persecuting infidelity of man (the same in every age) begun to crucify his great theory of THE NUTRITION OF PLANTS FROM THE ATMOSPHERE, than the use of Guano and of inorganic manures began to give it proof. 'Burn a plant, whether it be an Oak-tree or a stalk of Clover,' (for so the assertion of the great Analyst may be briefly epitomized,) 'and the trifling ash it leaves will show you all it ever got from the soil.' But the bulk, the *weight*, the great mass of its vegetable structure—where is that gone?

'Into the Air:
And what *seemed corporeal* hath melted
Like breath into the wind!'

The weight, the bulk, the vegetable mass, of a crop, is simply, its *Carbon*. COMBUSTION just undoes what GROWTH did: and nothing more. It recombines the Carbon of the plant with the Oxygen

of the air, and their union is *Carbonic-acid gas:* the very substance which the leaves of a plant *feed upon* in the air where it is presented to them in its gaseous form, in which alone they can absorb it: they do absorb it; and in their clever little laboratory, they pick out the carbon and return the oxygen; just as our own lungs take up the oxygen and return the nitrogen. Multiply the two surfaces of an oak-leaf by the number of leaves on the tree, and you will be able to form some idea of the enormous surface, which the plant annually presents to the atmosphere to carry on this work of absorption.

But the roots—what is their use then?

Examine them through a Microscope, and you will see that, as the Leaves are adapted to intercourse with AIR, so the roots are adapted to WATER: not stagnant water: for the sponge rots which is always saturated, and their myriad fibers are each furnished at the end with a sponge, capable of rapid expansion and contraction—suited, therefore, to a medium in which moisture should be ever on the move, downward by gravitation, or upward by capillary attraction. This is the true condition of the soil demanded of the mechanical department of husbandry. 'Pulverize your soil deeply,' said Jethro Tull, who thought that plants lived upon fine particles of mould: and he said rightly, but in so far as he said only half, and thought that was ALL, he thought wrongly."

FALL MANURING.

"Decay is only slow combustion: and when you are burying great cart-loads of carbonaceous manure in the soil before winter, you are making a hot-bed underground, which will raise the temperature of the soil throughout the long reign of Jack Frost, and preserve many a tender seed that would otherwise perish: and herein lies the chief and wise application of all carbonaceous or bulky manure. Rightly, then, so far as their knowledge went, did our forefathers, who knew nothing of Turnip culture, plow in their long manure before winter: a poor practice at best, we say, to put manure in immediate contact with a grain crop, but not more poor than to apply to a green spring-crop, under the burning sun of June, the treasures of the Farm-yard whose spirit is exhaled before the body is buried, and whose body is not rotted time enough to afford its remnant of inorganic food to the crop it is applied to."

FARMING WITHOUT KNOWING HOW.

"*Why* do you think—why does everybody think—that he can farm without having learnt how; that agriculture (if you like that word best) is an exception to *every* other human labor or pursuit, a contradiction to all Natural Law, and will bring a livelihood without study, cost or apprenticeship."

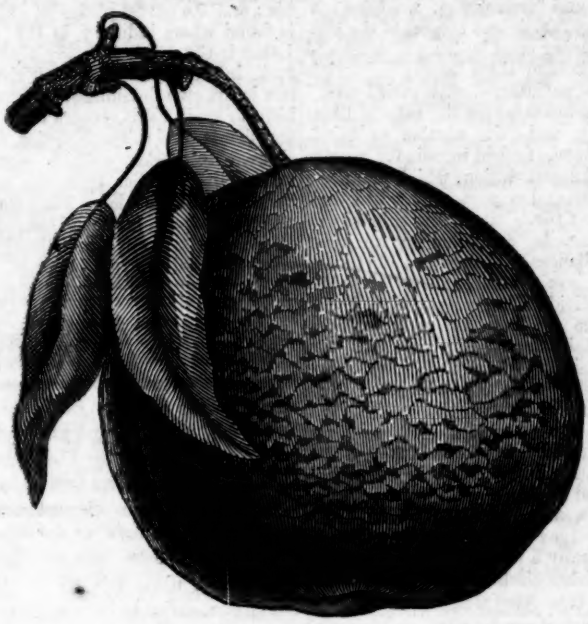
OPERATION OF "MIND UPON MIND."

"Among the various experiences which the much more social Agriculture of the last twenty years has brought, (for a change has come over us in that particular since) there is none which has struck me more than that part of its philosophy which consists in the operation of mind *upon mind*. That of 'mind upon matter' is not a very new subject: we see it every day—and hear of it too, till it is something tiresome: just now we are on a different theme, and a less trodden: 'mind upon mind' is our point at present, and perhaps the more important of the two, after all. I was going to say that in a pretty long and intimate experience of a rather curious soil to deal with, and to which never did man, horse, or implements, deny the epithet 'stiff,'—I too, like them, have had my own dumb reflections, and not the least emphatic of these have grown out of the every day phenomena of mind acting pon mind. You tell a man something, to-day, or express an opinion, or assert a fact, about a thing which he has perhaps never noticed or never heard, before; he smiles, starts, shakes his head, or delivers himself in some other way, for the ways are various in which men 'behave' (as the chemists call it) under the infiltration of a new idea. Whatever the mode may be, one thing you may be sure of, that in the grunt, the smile, the laugh perhaps, in fact whatever it may be that meets you, the attitude of mind betokened is that of—*dissent*. I am far from complaining of it: some of my best hands have given me infinitely the most mental graveling in this respect. But what I *do* complain of, and want to know where to apply for remedy, (since the Law tells us that for every Wrong there lies one)—is that these same hard-headed fellows, workmen, neighbors, friends, kind advisers, or whatever other relation they may hold—six, twelve or eighteen months afterward, coolly come to me, and with all that air of profound thought that becomes a man of reflective character, down-calving as one may say with something intensely wise, announce to me in new language of their own, the very thing which I at such time suffered a small martyrdom in the vain endeavor to urge *upon them*."

Aside from the intrinsic value of the book, as a teacher, we regard it as a valuable contribution to the agricultural literature of the country, and one of those books which will guadually lead the farmer, sometimes, away from the dust and toil of his calling to commune with other *minds*, who have, perhaps, taken a higher and wider range of the employment.

"WHAT THE APPLE MAN SAYS IN 1853."—Mr. N. P. MORRISON, of Somerville, informs us that he has just received *ten dollars* and *eight cents* for one barrel and 28 apples of the Hubbardston variety.—These apples were sold by the retailer at 50 to 75 cents a dozen. Mr. M. cultivates about *eight* acres of land; his fruit crop, this barren year, brought him *eight hundred and fifty dollars!* For 26 bushels of apples he received *sixty dollars*. For 136 barrels, he received *four hundred and eight dollars*. For strawberries and raspberries, *one hundred dollars*. The balance, to make up the whole sum, $850,00, was for cider apples, sold at 8 to 12 cents a bushel, and for early windfalls sold in July and August. Perhaps some of our young men will come to the conclusion that the market for *good* fruit is not yet overstocked.

☞ The value of the articles which have passed over the Erie Canal the present year is estimated to be $39,626,362—being $5,242,443 more than the value of the freights last year.



THE WINTER NELIS PEAR.

The above fine portrait of the Winter Nelis, was taken from a pear grown in the garden of Mr. ANDREW LACKEY, of Marblehead, a gentleman whose fine taste and zeal in the cultivation of fine fruits is worthy of imitation. Downing says:—

"The Winter Nelis holds, in our estimation, nearly the same rank among winter pears, that the Seckel does among the Autumnal varieties. We consider it *unsurpassed* in rich, delicious flavor, and indispensable to every garden, however small. It is a very hardy and thrifty tree, and bears regular crops of pears, which always ripen well, and in succession. Branches diverging, rather slender, light olive.

It is a Flemish pear, and was originated, above twenty years since, by M. Nelis, of Mechlin.

Fruit of medium size, or usually a little below it, roundish-obovate, narrowed-in near the stalk.—Skin yellowish-green at maturity, dotted with gray russet, and a good deal covered with russet patches and streaks, especially on the sunny side. Stalk an inch and a half long, bent, and planted in a narrow cavity. Calyx open, with stiff, short divisions, placed in a shallow basin. Flesh yellowish white, fine-grained, buttery and very melting, abounding with juice, of a rich, saccharine, aromatic flavor. In perfection in December, and keeps till the middle of January."

MR. RUSSELL'S ADDRESS.

We give below several paragaphs from the late Address of GEORGE R. RUSSELL, Esq., before the *Massachusetts Charitable Mechanic Association* at Boston, September 27, 1853. Did our limits allow, we should be glad to give the reader the whole address.

EVERY BODY PRETENDS TO WORK.

We live in a country where it is very uncomfortable to do nothing. Loafing is at a discount, and is the most wearisome of occupations. Carlyle says that "ease is for no man," and if ease means idleness, he must have been thinking of us. In the cities of Europe there is a class which passes through life without doing anything useful. Time has sanctioned the profession, and it consists of sufficient numbers to keep one another in countenance. But here the attempt is a desperate one, and of such doubtful estimation that the most inveterate lounger feels it necessary to incur the expense of a gilt sign, to indicate that he has a place of business. It is in vain that he goes round, seeking for sympathy. He feels that he is in every body's way, and is like the truant boy in the story, who invited every animal he met to play with him, but as all were too busy to attend to him, he finally concluded that he had better go to school.

DESIRE FOR ACCUMULATION.

The almost universal desire for accumulation is wisely implanted in our race to urge us to exertion, that we may not desist from labor while there is duty before us, but may be stimulated to continue on the field of action when no longer goaded by the spur of necessity. There is honor in the

acquisition and possession of money fairly won and judiciously expended; and when we look around us and see what has been done among us by the union of opulence and benevolence, we have reason to speak with gratitude and respect of the generous men who, having once built up a name and fortune, have left behind them lasting memorials that "the good *was not* interred with their bones." But it is one thing to amass for the sake of liberality and humanity, and quite another to grind, and haggle, and shave, to feed inordinate avarice or to gratify a foolish ostentation, which manifests vanity without taste, and extravagance without elegance, proving that there may be a vulgarity in riches which cannot be concealed by all their agencies and appliances. Overgrown fortunes, with us while they are evidences both of public prosperity and individual sagacity, are of very temporary influence whether for good or evil. Where entailed estates are happily unknown, the divisions and subdivisions of an inheritance, however large, soon reduce it to inconsiderable fractions; and at the end of a generation or two, the descendants of the rich man must work for their daily bread. Other names arise to go through the same unvaried process, live their little hour, and be swept away to be known no more. Such is the unfailing doom of wealth; and as time bears up new names and consigns the old ones to oblivion, there is doubtless many a righteous retribution inscribed on his revolving circle.

NOT TO RIDICULE OR DESPISE NEW THINGS.

The world's history is full of the persecution of great men, who stepped forward in advance of their age, warning us to look kindly on honest purposes, and to judge with charity what we do not comprehend. Let us not ridicule or despise new things, because they conflict with our observation or seem to be impracticable. There is hardly a discovery or invention in art that has not had its day of trial and discouragement. Many a man has gone heart-broken to his grave, in whom the fire of genius has burned, unseen and unappreciated, when adverse circumstances, or shrinking timidity, or cold neglect, or the want of a kind word, have come like a mountain upon him and kept his secret buried forever. Prison bars have been pressed by throbbing brows which would have redeemed the world. The records of the world are full of the neglect of merit, and yet nothing has been told. Perhaps there is scarcely a man living who has not during some portion of his life, known some one who pined unheeded, wanting the genial air and sunshine which never came. Men get misplaced, and do not meet the magnet to draw out the metal within them. Mediocrity writes verses when it should be holding the plow, and the true poet does the drudgery of life, not dreaming why the fire torments him. The flint and steel are cold and cheerless until struck together, and they may never come in contact.

ICE AND GRANITE, CHIEF PRODUCTS OF NEW ENGLAND.

Ice and Granite, it is said, are the chief products of New England; and they fitly symbolize the hardy character of her sons. It seems to be a universal law, that in those regions where Nature sparingly gives forth her bounties, and the coy earth reluctantly responds to the attentions of the husbandman, moral worth increases and manly virtues find more room for development. Blessed is the land whose children must work to live. The luxury that heralds decay finds no congenial resting place where toil is both necessary and honorable; and the surest pledge of enduring prosperity is found where industry is the ruling influence. Labor is the magic talisman that transmutes our rocks into gold, and sends our rivers to temper the sun in his own dominions. It converts our barren hills to grain fields, covers the wilderness with its foot-prints, and raises factories, and villages, and cities, with a celerity which seems the result of mere volition rather than the agency of human hands. It has made us what we are; and if we care for the preservation of our patrimony, and feel a generous pride in our distinctive character, we must acknowledge and honor it.

THE FARMER.

Some one has truly remarked that "the true farmer is always a philanthropist." Not only does he toil for the provision of his own wants, but in all his efforts, aims and undertakings, he is perpetually stimulated by the benevolent desire to leave the world better and more happy than he found it. Says an elegant author—"We contemplate Agriculture as subsidiary not only to abundance, industry, comfort, health, but to good morals, and ultimately to religion. We regard the farmer, stript to his employment, and cultivating his lands, as belonging to the first order of noblemen." In the language of Channing—"Real greatness has nothing to do with a man's sphere. It does not lay in the magnitude of his outward agency, but in the extent of the effect which he produces."

Every student of history is undoubtedly aware that a very great majority of the distinguished men of our Revolution—its war lions and statesmen, were from the producing classes. Washington, Jefferson, and Stark, were farmers; Franklin a printer, and so with hundreds of others that might be mentioned.

The following description of the farmer is by Phineas Fletcher, and will apply to thousands of the class.

His certain life that never can deceive him
Is full of thousand sweets and rich content;
The smooth broad beeches in the field receive him
With coolest shade till noontide heat be spent.
His life is neither lost in boisterous seas,
Or the vexatious world; or lost in slothful ease,
Pleased and full blest he lives when he his God can please.

WINDHAM CO. SOCIETY, VT.—The following gentlemen were recently elected officers of the *Windham County Agricultural Society* of Vermont, for the ensuing year, viz:—

MARK CRAWFORD, President.

L. G. BLISS, } Vice Presidents.
JOHN TUFTS, }

HENRY KELLOGG, Secretary.

CHAS. K. FIELD, Treasurer.

A HOME PICTURE.

One autumn night, when the wind was high
And the rain fell in heavy plashes,
A little boy sat by the kitchen fire,
A-popping corn in the ashes:
And his sister, a curly-haired child of three,
Sat looking on just close to his knee.

The blast went howling round the house,
As if to get in 'twas trying;
It rattled the latch of the outer door,
Then it seemed a baby crying:
Now and then a drop down the chimney came,
And sputtered and hissed in the bright, red flame.

Pop! pop! and the kernels, one by one,
Came out of the embers flying;
The boy held a long pine stick in hand,
And kept it busily plying;
He stirred the corn and it snapped the more,
And faster jumped to the clean-swept floor.

Part of the kernels hopped out one way,
And a part hopped out the other;
Some flew plump into the sister's lap,
Some under the stool of the brother;
The little girl gathered them into a heap,
And called them "a flock of milk-white sheep."

At once the boy sat as still as a mouse,
And into the fire kept gazing;
He quite forgot he was popping corn,
For he looked where the wood was blazing;
He looked and he fancied that he could see
A house and a barn, a bird and a tree

Still steadily gazed the boy at these,
And pussy's back kept stroking,
Till his sister cried out, "Why, George,
Only see how the corn is smoking!"
And, sure enough, when the boy looked back,
The corn in the ashes was burnt quite black.

"Never mind!" said he "we shall have enough,
So now let's sit back and eat it;
I'll carry the stool, and you the corn—
It's good—nobody can beat it."
She took up the corn in her pinafore,
And they ate it all, nor wished for more.

Harper's Magazine.

CULTIVATION OF THE CHESTNUT.

MESSRS. EDITORS:—"Will you please to give your readers some directions for the cultivation of chestnuts. I tried to raise them two years ago, from seed, but failed entirely, and a neighbor tried them last year with like success.

Yours, &c. C. D.

Columbus City, Iowa.

There is no difficulty in raising chrstnuts from the seed, if proper precautions are taken in gathering, preserving and planting the seed. The chestnuts which are designed for planting should be gathered as soon as they are fully ripe, and the largest and plumpest should be selected. They should be immediately placed in mould or sifted earth and put away in the cellar, or buried in the ground, out of the way of the frost, rats and children. Be sure to use earth enough about them to prevent their heating. When the spring opens, prepare a place of ground, by pulverizing and ploughing it deeply, and plant the seed in rows three feet apart in the rows. They should not be covered deep, else they will rot in the ground. Half an inch of covering will answer every purpose. If you wish them to grow straight and thriftily, they must be well hoed after planting. They may remain in the nursery rows two or three years, but if more than two years, the tap root should be cut away with a sharp spade. They will then throw out side-roots, and will endure transplanting the next year all the better. There is no difficulty in transplanting chestnuts, if the tap root has been cut off a year or two before. We transplanted six trees last spring from a nursery in this neighborhood, and they have since made an average growth of three feet.

Many people complain that their chestnuts are stunted in their growth, or, that they grow crooked. This may be remedied by cutting them down even with the ground so soon as they have become stout enough. They will then throw up a nice, straight shoot, that will grow very rapidly, and very little if any time is lost in making a large and healthy tree. The whole nurishment from the roots, however, must be thrown into the one shoot, by cutting or rubbing all others off.—*Iowa Farmer.*

For the New England Farmer.

OBSERVATIONS IN A GARDEN.

SUPER-PHOSPHATE OF LIME.

For the few past years, I have been on the look-out for a cheap concentrated manure. Last year I tried guano on a few young trees, and was well satisfied with the results. But this season I was told that there was none in the market—although there was occasionally a little, but very dear, and sold in too large quantities. Guano will always sell well, and why is it that our merchants do not import more, if it is to be had! Disappointed in procuring this article, I purchased a sufficient quantity of Deburg's super-phosphate of lime, to give it a test. But instead of making vegetables "*jump*," it did'nt hardly keep them awake; and this was discovered only when it was too late to remedy the evil. Later in the season, a dealer in the article told me he had some that he *knew* was good. Still I shook my head, when he, (determined that I should try it) gave me 15 or 20 pounds. I tried it in corn and around corn, and also around potatoes, cucumbers, squashes, tomatoes, &c., but did not perceive any benefit. The potatoes and tomatoes look very fair, but not so well as if ordinary manure had been used. The corn, cucumbers and beans, are a little below respectability; and the poor squashes hav'nt been able to keep alive upon it! The article was Deburg's. Now I am unable to say what its composition was (though I fancied I saw a little guano in it) yet I can hardly conceive of a chemical composition, having so many ingredients as it is said this has, that would not have told more beneficially. If all the odors were not permanently *fixed* in this new fertilizer, I might venture to say it evolved one, and that was *suspicious!*

PLUM TREES.

The curculio has committed its ravages as usual this season on my trees, and those of the neighbors, in spite of brick and mortar paving, which some of them have adopted. On some trees that set full, hardly one was to be seen in August. But next season they anticipate better results, as they say the insect will not be able to burrow beneath the tree the present. But how did the curculio get up through the pavement *this season?* The

best remedy which I have tried, as yet, is sprinkling the fruit and the ground with slacked lime. If the spiritual rappers, who profess to shed so much light on benighted man, in the form of fancy theology, would lend their aid in exterminating this pest to the culture of the plum, there's a bare chance that they might do some good! And any reliable facts from them, as a remedy for the potato rot, would be handsomely rewarded by the State.

WASH FOR TREES.

For the two previous seasons I have used ley as a wash on about 20 young apple trees, simply passing a moist sponge once over the surface of the bark. These trees grew well, and only one seemed injured by it, which finally died. I am not certain that the ley hastened its death, as the tree was not vigorous, and might have died at any rate; but the dark and cracked appearance of the bark led me to believe that it was injured by the wash. On the whole, I think ley rather dangerous. The past season I used a mixture, which seems to me preferable—one certainly which I shall try again. Fine soap-stone dust, with a little lime, was mixed with strong soap-suds, to about the consistence of paint, with a small quantity of yellow ochre stirred in to improve the color, and applied with a brush. The trees grew finely with this harmless coating, and new, in November, are of a very uniform light fawn color, the body of the mixture having been washed off by the rains. I think this wash possesses all the good qualities of ley, without the bad.

THE DIX PEAR.

I find this pear is highly valued in the market, though not handsome, and sells for from 50 cents to one dollar per dozen. As to quality, very few pears equal it, and an extensive retailer of fruit told me a few days ago, that, in his opinion, it was "a great way ahead of anything else." Its good quality is not denied, but Mr. Cole and other cultivators say, "that it is uncertain, and 15 years in coming into bearing." The obvious remedy would be to graft it on the quince, or upon old pear stocks. But a nursery-man says it isn't good on the quince, though it might possibly bear earlier, and that scions set in an old pear stock must be fruitless for 15 years! For a pear so excellent as the Dix, one having so strong a character, and retaining it even in the last stages of decay, this is discouraging. Can not some cultivators who read your journal speak more hopefully of this fruit? D. W. L.

West Medford, Dec. 6th, 1853.

REMARKS.—Thank you, sir, and hope to hear from you again.

PEOPLE'S JOURNAL.—This is the title of a new paper, which we have just received. It is principally devoted to Agriculture and Mechanics; and, if the first number is a fair sample, the journal will be no small addition to the rank of similar publications. The number before us is profusely illustrated, with forty engravings, some of them very fine and of a large size. It is printed in an excellent manner, and altogether presents a most inviting appearance, which we hope will not fail to secure it a large sphere of usefulness.

Published in monthly numbers of 32 pages each, by ALFRED E. BEACH, 86 Nassua St., New York. Price 50 cents a year.

For the New England Farmer.

MANURES—BARN CELLARS.

MR. EDITOR:—I am much obliged to you for showing such deference to my wishes in relation to that long communication. It fills a little more space than I expected: otherwise, with the exception of a few slight errors—the greatest one in the "conclusion," where it should read, "the results of *the experiments of* our best practical chemists,"—it answers my sanguine expectations. But I was sorry that you found it necessary to remark on its great length, and shall regret that so much of my worthless scribbling was mixed in with those excellent extracts from our best authors, if it prevents the reading of the latter. I divided it as it was for two reasons; 1st, it was a season of little leisure, and I could write but a few lines at a time; 2d, some farmers' boys have but little leisure for reading, and that mode of dividing would give them ample stopping places. For one I prefer entire articles, even to ten pages at once, rather than be ten months, or even weeks, reading the same number of pages. Indeed, I seldom read anything that is "*to be continued*" till it is discontinued; then, if it is interesting, it can be read more understandingly and without the vexatious suspense and anxiety that enters so largely into the experience of readers of "Popular Tales;" if uninteresting, it is a gratification to know one is not to be bored with it again. One reason for the great length of the communication was, being unwilling to omit regular reading for the sake of finishing it, I continued to find, in every agricultural book I took up, and every paper that came to hand, something that seemed to prove that the guidance of science is preferable to that of unscientific experience.

Without waiting to see whether Mr. Silas Brown and his friends—arrayed in their inviolable armor—turn upon me and overthrow me, I wish to make another reference to him on his "Barn Cellars, Restorative Gases," &c. A correspondent of the *Maine Farmer*, Mr. Jabez D. Hill, of Moscow, in a criticism on the above named communication, says:—"It is true that the gases from *my* dung heap have not succeeded in escaping from the world; but what individual benefit do I derive from the fact that they have been concondensed in the great laboratory of nature and descend with their fertilizing influence upon my neighbor's swamp?" I think Prof. Johnston—as capable of "accurate chemical experiment and nice observation" as any man in America,—says the gases are absorbed by plants in proportion to their healthy, thrifty condition, nature herself seeming to be partial to the fields of the best cultivators. Your correspondent says: "I am not able to comprehend what loss green manure can sustain in a few weeks while lying in a conical form as thrown from the window before the process of fermentation takes place to disengage the gases." Probably no one could comprehend the loss sustained if the process of fermentation could be prevented for the time. But it appears from the sentence before the one quoted, that the decomposition of manure is hastened by the action

of rain and snow, which in this country seldom falls at intervals of weeks. As good authority as the *Cultivator* affirms that even freezing and thawing wastes the valuable properties of manure. It is also well known that Prof. Mapes, a practical farmer as well as chemist, mixes large quantities of prepared muck with his manure, to absorb the volatile portions. In answer to your correspondent A., of Tarrytown, N. Y., let us see what Dr. Dana and Prof. Johnston have told us about manure and the loss it sustains by exposure. Muck Manual, 3d. edition, Sec. 191. "Estimating the nitrogen as ammonia, the yearly produce of one cow is 156 lbs. of nitrogen, equal to 189 lbs. of pure ammonia, or equal to 677 lbs. of bi-carbonate of ammonia of the shops. A single cow will, therefore, give annually, fed on hay and potatoes, 31,025 lbs. of dung, containing 4800 lbs. geine, 677 lbs. carbonate of ammonia, 71 lbs. of bonedust, 37 lbs. of plaster, 37 lbs. of chalk, 24 lbs. of common salt, 15 lbs. of sulphate of potash. Lectures on the applications of Chemistry and Geology to Agriculture: XVIII, § 11. "The *recent* urine voided in a year by a cow 13,000 lbs., solid matter 900 lbs., containing of urea 400 lbs., and yielding of ammonia 230 lbs. When left to ferment for 5 or 6 weeks alone, and with the addition of an equal bulk of water, the urine of the cow loses a considerable proportion of volatile matter, and in these several states will yield in a year,

	Solid Matter.	*Yielding of Ammonia.*
Recent urine	900 lbs.	226 lbs.
Mixed with water, after 6 weeks.	850 lbs.	200 lbs.
Unmixed, after six weeks	550 lbs.	30 lbs.

§ 17. Of farm-yard manures, &c. 10 cwt. of dry food and straw yield in recent dung 23 to 25 cwt., at the end of six weeks 21 cwt., after eight weeks 20 cwt., when half rotten 15 to 17 cwt., when fully rotten 10 to 13 cwt." Muck Manual, Sec. 204. "Barn-yard manure is too often exposed to rain. Its salts are thus washed out and the natural liquids mixed with it drain away, and are thus lost. It is a positive money loss, for the composition of an imperial gallon of this muck-water, as determined by Johnston, in two samples, is as follows:

	From cow dung washed by rain.	*From yard dung watered with cow's urine.*
1. Ammonia	9.60 grs.	23.30 grs.
Solid organic matter	200.80	77.60
Solid inorganic, or ashes	268.80	518.40
	479.20 grs.	617.30 grs.
2. The ashes of a gallon consisted of alkal. salts	207.80 grs.	420.40 grs.
Phosphate of lime and magnesia, with a little phosphate of iron	25.10	44.50
Carbonate of lime	18.20	31.10
Carbonate magn. and loss	4.30	3.40
Silica and a little alumina	13.40	19.00
	268.80	518.40

These results speak for themselves. They show rills of wealth gushing from the farmer's manure.

Bridgewater, Vt., Nov. 10th, 1853. J.

BONES.—Have these carefully saved. Keep an old barrel beside your ash house, and whenever you find a bone, throw it in. It is wonderful how they accumulate. If you want to dissolve them, make a pile of bones and fresh ashes; wet moderately, and leave it for a month or so. In every two hundred lbs. of bones there is enough animal matter, phosphate of lime, and salts to grow an acre of wheat; and, we know not how many barrels of apples. When you plant a fruit tree, give it bones at the root.

For the New England Farmer.

DEATH OF BEES IN WINTER.

MR. EDITOR:—Believing that the several communications relating to the death of honey bees during the winter months, which have appeared in your paper, may have convinced many of your readers that they die for want of proper protection from the cold, and not being satisfied that such is the fact, I feel bound to submit, for the consideration of your readers, such facts and opinions as have been gathered from many years of experience and careful observation.

The fact that most bees die during our coldest winters has naturally led many to suppose that intense cold is the agent which causes their death; but a careful observation will, I am confident, lead to a different conclusion. If cold is the only cause of their death, tight hives and warm houses will be the remedy. But he who tries this remedy, will often find it a fatal one for the bees.

Every case which has come to my knowledge, where bees have died, have been in tight hives, while those in the same house, that lived, were in open hives. To more fully satisfy myself on the subject, in December last, I took three swarms for an experiment. No. 1 was a young swarm in a hive with iron legs 3-4 of an inch in length, to allow a free pass of air between the hive and the bottom board; this was placed in an open pen exposed to the coldest winds. No. 2 was nine years old, in a hive of similar construction, but protected at the bottom by a cellar, and placed in a warm house, though in an exposed situation. No. 3 was seven years old, in a hive with legs ½ an inch long, protected by a cellar, and covered with thick rugs, and also placed in a warm house.

The result was as follows:—In No. 1, about one-half pint of bees died during the winter; in the spring they were in good condition, and the first of June sent out the largest swarm I ever had. No. 2 lost but very few bees during the winter, had a middling sized swarm. No. 3 lost more than a pint of bees during the winter, and did not swarm. At the present time they are all doing well.

If the cold, and that alone, will cause their death, why did No. 1 survive the intense cold of last winter? or why did a swarm of my neighbor's which were in an open hive, escape, while in the same house, three swarms in tight hives died?

The following is my opinion. The vapor arising from the animal heat, or breath of the bees, often collects in such quantities as to run down the sides of the hive to the bottom, where, in very cold weather, it congeals, and thus seals up the hive and makes it nearly air tight, with the exception of the entrance, which is easily closed by the first driving snow storm. To suppose bees can live a single day with a hive thus closed, would be unreasonable. That all bees which die in cold weather are killed in this way, I will not attempt to as-

sert, but that some do, I am fully convinced by actual experience. That bee-hives should be as well ventilated as our dwelling-houses I have not a doubt; in fact, I am fully satisfied that a hive should never set within three-fourths of an inch of the bottom board, though I think it may be well to place a cellar loosely round, during the winter months, to keep the winds from driving directly through the hive. Y.

TREES ON FARMS.

Another point of some importance, as connected with British farming, is *that of scattering trees in the hedges and open fields.* On lands devoted exclusively to pasturing, such are needed for their shade; and, scattered generally over a country, they add much to its beauty and picturesqueness. Especially is this the case in this country, where, owing to a damp atmosphere, the falling leaves soon decay and mingle with the soil, instead of becoming dry and littering the land and highways, as with us. Englishmen are justly proud of their old, spreading trees. Landlords often enter it in their leases, that no tree shall be cut down. Still, in those parts of the empire, where the farming is best, the trees are going. You now see but few trees in the wheat-fields of the low-lands of Scotland, for instance; and very few in the fields of such farmers as Mr. Pusey and Mr. Mechi. These men do not sacrifice their love for the beautiful in nature. They cultivate trees in their proper place. They are the last men, I suppose, who would leave a country naked and bald; but trees have no longer a place among their wheat and barley.

In our land of scorching summers, let there be trees. It would be barbarous to root them out from our cultivated fields, where they are injurious, without, at the same time, securing their growth in other places, where they are not only harmless, but pleasing to the eye, conducive to health, and often more profitable than anything else the soil will grow. Let them stud our pasture lands, as gems of beauty and of comfort. Our cattle need the means of coolness in summer, and warmth in winter. Only by attending to this matter, shall we ever approach that excellence in this department, which our British brethren have attained. More depends upon cherishing the breeds we have, than upon importing new. Let trees line our highways. Their roots and tops will be a little injurious to the bordering lands, but not much; the weary traveller and his beast will rest under their shade; our children will delight the palate from their produce; and our grand-children build their houses with the timber they grow. If our road-sides were adorned with a tree once in five rods, the rows alternating with each other, as far as convenient, the roads, with the exception of here and there a wet place, which might be intermitted if thought desirable, would not be a whit worse, and in many soils would be far better. If one-fourth of these trees were rock maples, they would furnish sugar for the population, whenever it should be cheaper to manufacture than to buy; and no one knows what future times will be. Rural dwellings should be adorned by shade trees. An *American* farm-house, under a sun shining intensely at least two hundred and fifty whole days in a year, is a very different thing from an English country residence, where the sun scarcely shines as many hours, and that mainly morning and evening. Yet the Englishman takes ca to provide his residence with trees; the breeze that enter his windows come purified by a previous passage through dense foliage: while too often the American neglects to surround himself with these *conservators* of health and comfort; so that he and his family breathe air, not only scorching hot, but often surcharged with carbon and ammonia. An American fasm-house, without trees at a little distance, (not so near as to produce injurious dampness,) is out of all taste, Is unfavorable to health and comfort, and in utter disregard of the great law of adaptation to circumstances of situation and climate.—*Albany Cultivator.*

For the New England Farmer.

LOW-LIMBED, VS. TALL TREES.

Oak, elm, maple, pine and most other trees, which, in a dense forest, send up smooth, bare trunks, that may be measured by tens of feet, will in an open field, if left to themselves, limb out near or quite to the ground. Analogy seems to suggest the propriety of allowing apple trees, in similar circumstances and in our climate, to follow their own modest instincts in this respect, instead of compelling them to Bloomerize, without even a leaf to protect their spindle-shanks from the direct rays of an August sun.

On this theory, confirmed by some little observation, I planted an orchard of over one hundred trees in the spring of 1850. After considerable inquiry among nursery-men, I bargained with the Messrs. LAKE, of Topsfield, who said they could furnish just what I wanted—*trees not tall enough to sell well!* They were to be two years from the bud; consequently small at best, and still smaller for being "stunts." Some were however three or four years old—less attention being paid to age than to the required form of the trees. When they were delivered, Mr. L. pointed to a slim, lank-bodied, small-topped tree, and remarked, "there is a fine one—sold it for 75 cents; but, as it is not taken away, you may have it for 50 cents." I replied, "I would like to see it grow with the low-limbed trees I have bought of you for a shilling each, and will promise to set it out well."

Now for the result of four seasons' growth.

The tall tree was put in the garden, and in a soil in which a Louise Bonne de Jersey pear, planted near by and at the same time, has added full six feet to its stature; while the twigs of the apple have shot out one, two, sometimes six inches a season; but not enough in the four years to change its original forlorn appearance. The trunk, a foot from the ground, measures six and a half inches in circumference, and is now, as it was when planted, nearly of the same size all the way from the ground to the limbs, which branch out 5 feet high.

The small trees were set in a light, sandy and gravelly soil, from which wood had been previously cut; was cleared off and plowed in the fall previous, when a compost of meadow mud, lime, ashes and leaves, was made into piles, convenient for use in setting the trees in the spring. This is all the "manure" they have had, except what they may have stolen from corn and potatoes, lightly manured in the hill, that have annnally been planted among the trees, and one *mulching* of coarse meadow hay. I have measured a row of 14 trees, which I think a fair average of the or-

chard, and find the circumference of the smallest six inches; of the largest, ten inches; average of the whole fourteen, about one foot from the ground, seven and one-half inches. The shortest trunk, seventeen inches; the tallest, three feet; average of the fourteen trunks, two feet three inches. I measured one limb that had grown eight feet in the four seasons, but in most cases I could not decide where the first year's growth commenced. But, take the trees together, the small ones have made about as many feet as the tall one has inches.

The exact circumference of either the small trees or the tall one when planted, is not known; but, while the first have changed from mere bushes to respectable trees, the latter has remained in *statu quo*.

The tall tree has been full of blossoms every spring, but has borne no fruit. Of the small ones, seven bloomed last year, (the third year from planting), and matured seven apples; this year twenty-one bloomed, but only one apple ripened.

In justice to the tall tree, I ought to add that it has sent out shoots every season from both roots and trunk, apparently for the purpose of remedying its unnatural position; but these have been regularly Jack-knifed, to give the tree a "fair chance," and the full benefit of "cultivation."

S. F.

Winchester, Nov. 8th, 1853.

GREAT CROPS.

The Annual Meeting of the *Rockingham, N. H., Fair*, was holden at Exeter, on the 9th inst. We find in the *News-Letter* the report of the committee on crops, awarding the following premiums:

The Committee on crops awarded the following premiums:

To Joseph Winslow, of Epping, for 111 bushels and 14 quarts, of Indian corn on one acre of ground, $5.

To Joseph Cilley, of Nottingham, for 121 bushels and 14 quarts of Indian corn on one acre and 23 rods of ground, $3.

To Stephen Dow, of Brentwood, for 175¼ bushels of Rye on 4 acres 41 rods of ground, $4.

To Daniel C. Long, of Kingston, for 30½ bushels of wheat on one acre and 24 rods of ground, $4.

To A. C. Taylor, of Hampton, for 50½ bushels of Barley on one acre and 10 rods of ground, $4.

To James H. Dow, of Rye, for 68 bushels Oats on one and a half acres of ground, $4

To Rufus C. Sanborn, of Hamptonfalls, for 151½ bushels of carrots on one quarter of an acre of ground, $3.

The Committee on Bog Meadows awarded to G. C. Brown, of Stratham, a premium of $5.

The above are certainly large corn crops. We were wondering what appearance that field would present, which gave to its fortunate owner, *one hundred and eleven bushels and fourteen quarts of corn on one acre!* We have recently harvested a field where we obtained about *sixty* bushels, only, to the acre. On passing through it repeatedly before it was cut, we could find scarcely a dozen hills to the acre that contained *only* three ears; on most of the hills there were four ears, and on many of them were five, six and seven, making an average, as we thought, of five ears of good sound corn to each hill. We planted three feet and six inches apart, each way, giving 3,555 hills to the acre, which multiplied by 5, the number of ears to the hill, gives 17,775 ears on an acre. The common eight-rowed, yellow corn, will require 270 ears for a bushel of shelled corn. Now dividing the number of ears on an acre by the number of ears (270) required to make a bushel, and it gives 65 bushels and about 27 quarts, to the acre. Now if 46 bushels of corn were added to an acre suc as has been described, it will not seem strange that we wondered what kind of an appearance it would present. It certainly would be a sight such as we have never yet been permitted to see.

HOW TO HAVE PLENTY OF WATER.

Pure, clear water, forming, as it does, at the same moment, both the emblem and embodiment of refreshment and comfort, is looked upon as a vital element of satisfactory existence, by all who hate dirt, parched lips, dusty lungs, stratified deposits on the skin, and parti-colored linen. It also forms a most agreeable class of pictures for the eye, in the form of placid sheets, bubbling brooks, sprinkling jets and flashing fountains; and through the ear, it gives us the music of cascades, the thunder of cataracts, and the grave roar of ocean surges.

It is no wonder that all are ready to labor for and welcome so agreeable a companion. The large cities have brought it many miles in hewn masonry, at a cost of millions, that they may syringe their streets, feed their baths, and keep a ready antidote for the incipient conflagration. The country resident longs for the termination of the parching drouth, when drenching rains shall fill his cisterns, replenish his failing well, and set the brooks in motion. Many are looking with envy at some rare and "lucky" neighbor, who happens to have an unfailing spring; and others, as we have often witnessed, placing the water hogshead on the ox-sled, proceed to drag their needed supply from a distance of one to three miles, as the case may be, and as they can get it from the pond, creek, or some better supplied resident. We have positively seen a wealthy farmer drawing rain water a mile, after having allowed five times the amount he ever would have needed to run to waste immediately before his eyes; and we venture to assert that not one farmer in a hundred who has suffered from a want of water during the present year's severe drouth, has not committed a similar waste, though perhaps sometimes less in degree.

The great mass of country residents seem to have no more conception of the enormous floods of clear, pure rain water, that annually pour off of the roofs of their dwellings, wood-houses, barns, sheds, and other out-buildings, than if they had never heard of such a huge watering-pot as the clouds in the sky. If all the rain which falls in the Northern States within a year, should remain upon the surface of the earth without sinking into it or running off, it would form an average depth of water of about three feet. In the Southern States, it would be more; within the American tropics, it would amount to about ten feet; and near Bombay, in Asia, to twenty-five feet.

Every inch of rain that falls on a roof, yields two barrels for each space ten feet square; and seventy-two barrels are yielded by the annual rain in this climate, on a similar surface. A barn thirty by forty feet, yields annually 864 barrels—

that is enough *for more than two barrels a day*, for every day in the year. Many of our medium landholders have, however, at least five times that amount of roofing on their farmeries and dwellings, yielding annually more than four thousand barrels of rain water, or about *twelve barrels or one hundred and fifty ordinary pailfuls, daily.* A very small portion of this great quantity is caught in the puny and contemptible cistern and tubs placed to catch it; but full-sized, capacious reservoirs, fit to hold this downward deluge, we know not where to find, even in a single instance!

It is true, that where a constant draught is made on a cistern, it need not hold the full year's supply—even one-sixth part, will, in general, answer; as the variations in the wet and dry seasons do not often amount to more than the rain of two months. But allowing all this, where shall we find a cistern for a thirty-by-forty-feet barn that holds this sixth, or 170 barrels? Or one proportionately large, for a broader roof?

Now what would the large supply of water from sufficient cisterns enable the farmer to do? Or rather, what might he *not* do with it?

1. In the first place, all the cattle on a farm well furnished with buildings, might obtain all the water needed for their daily use.

2. Or, if instead, the usual proportion were supplied them by streams and wells, a large upper cistern would furnish all the conveniences of showering, washing, and sweeping off feculent matter, which are derived in cities from pipes and hydrants.

3. Or, if large cisterns were placed in the upper part of the farm-buildings (where the space they would occupy would be of little comparative value,) they would supply a fountain one-fourth of an inch in diameter, spouting fifteen feet high, for two hours every summer afternoon—the cisterns being unoccupied in winter.

4. In addition to supplying the fountain they would keep up the water in a pond at the foot of the fountain, thirty feet in diameter, (or with equal surface) and allow eight barrels to flow off daily for watering cattle or for other purposes, during the hottest evaporating days of summer.—*Country Gentleman.*

POLLED SHEEP.

THOS. BROWN—ESTEEMED FRIEND: There are two reasons which induce me to offer a few remarks to the Farmer on the subject of Polled Sheep. One is, I believe a decided advantage may result to the wool-growing community from a consideration of the subject. The other is, I am now compelled to buy horned rams for a cross of blood, because I cannot get such polled ones as I desire that are not nearly allied to my own stock.

I believe that nearly all middle and long-wooled Sheep are polled, while the males of the finer wooled varieties are usually horned.

I have for many years regarded horns on Sheep in a domesticated state, as not only a useless, but a troublesome and expensive appendage; and in 1845 fortunately getting hold of a very superior polled ram, I commenced to try to breed a flock which should be hornless. I proceeded by not only selecting polled rams, but, so far as practicable, perfect polled ewes also; and here let me remark, a ewe that appears to the casual observer to be without horns is not always a perfect poll. There must be a cavity, instead of a fulness, where the horns usually attaches, or she cannot be depended upon to produce polled lambs with certainty, although the sire be polled.

The result of my eight years' labor is, I do not now have but one horned ram lamb in about ten or twelve; and I do not believe that I have sacrificed one iota in form or constitution, or in quality or quantity of wool.

Some of my objections to horns are briefly as follows:

1. The substance that goes to make horns is the same that enters into the composition of wool.

2. If rams are polled you may let all the pure-blooded ones run *entire* to the age of one or two years, and then any that are rejected as rams will make as good wethers as if gelded while lambs.

3. Where horned rams run in flock in summer they are sure to fight, and if they do not kill each other outright, loose the skin about the horns, become fly-blown, and without constant care more or less of them die.

A gentleman who has been engaged in wool-growing over twenty years, and who keeps near two thousand sheep, told me he annually lost rams enough from these causes to pay all his taxes.

4. Horned rams frequently strike ewes in the side, bruising them, loosening their wool, and occasionally causing them to cast their lambs.

5. You can shelter and feed about double as many polled as horned rams in a given space.

In conclusion I would say I am always open to conviction. Has any one a reason why sheep in a domesticated state should have horns?—WM. H. LADD in *Ohio Farmer.*

FATTENING SWINE.

The business of fattening swine is often rendered far more expensive than it need be. Many farmers feed only their best and most valuable grains and vegetables, and feed them raw. In this way a much larger quantity of food is required, than would be necessary, were the food prepared by boiling or steaming. Indian corn, fed whole, is always an expensive article in fattening any animal, and those who rely upon it exclusively for making pork, must not be surprised if their meat costs them more per pound, than the same is worth in the market. Many farmers are aware that the corn consumed by an animal, will, if sold in the market, at the common market price, purchase more pork than it will make. But by selecting poor corn, grinding it into meal, perhaps with the cobs, and cooking it either by boiling or steaming, and when convenient mixing it with boiled potatoes, turnips, beets, carrots or pumpkins, all of which are highly nutritious and salutary in their effects upon the general health, a very considerable and important saving may be made, and the pork, instead of being an expensive article of food, will be rendered an economical one.

In connection with every piggery there should

be an apparatus for steaming or boiling, where the several articles of food can be prepared and tempered with economy and ease. Apples are excellent for feeding swine, and if boiled or steamed and mixed with corn and cob meal, will be found to contribute essentially to the economy of fattening not only of swine, but of other animals. A person who was some years since engaged rather largely in fattening pork for the northern market, assured us that he preferred apples and meat to any other diet. He expressed his belief that pork could be fattened on this food, for four cents per pound—less even, we thought, than upon any kind of grain. In this economical manner the farmer may every year fatten pork not only sufficient for his own use, but frequently a surplus for the market, and it will be of the best quality.

For the New England Farmer.

MARYLAND CATTLE SHOW AND FAIR.

Mr. Editor:—The Annual *Cattle Show* and *Fair* of the Maryland State Agricultural Society was held near this city, last week. Your readers may perhaps be interested in reading a brief account of the manner in which such exhibitions are conducted in this region.

The show occupied four days. Admission was obtained, only by paying twenty-five cents. In New England, this farmers' festival is free to all; as free as the light of the sun. But there are reasons why an admission fee should be exacted here.

The ground occupied, being near the city and being devoted exclusively to the interests of the Society, is subject to a ground-rent. The fixtures being of a permanent character, are more costly. On three sides of the lot, containing, I should judge, twenty-five acres, there are substantial, covered stalls, opening toward the centre, neatly whitewashed and numbered. Near the centre, there are a number of buildings, designed for the accommodation of exhibitors of mechanical and agricultural implements, and for offices. These buildings, though slightly built, are in good taste,—are very commodious, and make an imposing appearance. There is also a building in which hay and grain are kept for the accommodation of exhibitors. In front of these buildings is a race course, or *hippodrome*, the track being covered with tan-bark, and the whole enclosed with a railing. These buildings and fixtures necessarily involve much expense.

Then the amount paid out in premiums is much greater. Thirty-five hundred dollars was, this way, disbursed last week. Furthermore, there seems to be propriety in imposing a tax upon the multitudes, who go out from a large city, like this, to gratify an idle curiosity, and who contribute nothing to agricultural improvement, except in the consumption of her products.

The State, I am told, has made no appropriation to agricultural societies, so that if progress be made, it will be attributable to individual enterprise and liberality.

Our national government, as well as many of the State governments, seems very reluctant to recognize agriculture as among the departments of human industry which deserve protection and encouragement. Four-fifths of the whole population of our country are agriculturists. And yet while millions are annually expended for the benefit of commerce and manufactures, agriculture gets only a Patent Office Report, once in a twelvemonth.

But I must to the show. The exhibition of *Horses* was very good. There were some valuable studs, breeding mares and matched geldings. The Morgan breed seemed to be in the ascendant.

The farmers of Maryland have hitherto paid but little attention to the raising of horses. As good horses may be found in Baltimore as elsewhere; but most of them are brought in from other States. *Neat* stock was in great abundance, but not in great variety. I saw no working oxen, nor any steers. Of bulls, old and young, and milch cows and heifers, there was a great abundance. The Durhams and Devonshires seemed to predominate. Of these breeds there were several very superior animals, both bulls and cows. There were also Ayrshires, Alderneys and Natives, and fine specimens of each. I should judge, from this exhibition, that preference is given, in this region, to the Devonshires. They doubtless excel in symmetry and beauty of form and color, and perhaps in hardihood. But for the dairy, I think them inferior to the Ayrshires, and for the stall, by no means equal to the Durhams.

The show of *Sheep* was excellent. A great number and superior specimens. The Bakewell, South Downs and Native breeds, were the principal. Three Merino bucks of recent importation, "could not be beat." I know not why Maryland may not successfully compete with Vermont in wool-growing. In this climate, sheep need no shelter in winter, and will do well with but little hay or grain.

In the department of *Swine* there was a very liberal show. The Berkshires were fully represented; the Chester breed, and the Native also. There were a few Suffolks, which were much admired and sold for a high price. The Berkshires are favorites with the farmers in this region, on account of their hams, which are thought to be superior. The Chester hogs, from Chester county, Pa., are popular in this State, if popularity can be predicated of a brute animal, on account of their size. They are sometimes made to weigh as much as seven hundred pounds, dressed.

There was one pen of hogs, from Virginia, which were greatly admired. There were fifty-one, all of them very fat, and said to be only sixteen months old. I think they would average three hundred and fifty pounds dressed. The tender said they had had no meal; their food being dry corn with water. It was a spectacle well calculated to make the mouth of a Gentile water.

The show of *Poultry* would not suffer by comparison with the great "Hen Convention" which, whilome, came off in Boston. Such a clucking and cooing and cackling and crowing as was kept up in the grove, occupied by this department, must have been a rare treat to ornithological amateurs. The chicken mania must have taken strong hold, and been widely diffused in this region. All the "improved" breeds, from the majestic "Imperials" down to little sputtering bantams, were exhibited, finer specimens I have never seen. There were also in abundance, geese, ducks, turkeys, peacocks, Guinea-hens, pigeons and nondescripts.

Of *Agricultural Implements* there was a great display. Machines for threshing, mowing, reaping, sowing, planting, grinding, sawing, making bricks, cutting hay and vegetables and pressing hay and tobacco, were exhibited in the full tide of successful experiment. Plows in almost endless variety, harrows, rollers, and all the smaller implements, were exhibited in great numbers.

Among the plows, I noticed the left hand plow which is common among the Germans, in Pennsylvania; also the short plow, which is in general use in this State. The Michigan plow and the subsoil plow I did not notice. The latter I know has been extensively used here.

I have mentioned many things and many animals, which I was glad to see in the enclosure. As a faithful chronicler, I must name what I should have preferred not to see at the show.

We are told that when the sons of God had assembled on a certain occasion, Satan came also among them. In like manner, or in some manner, when the farmers of Maryland had driven together their flocks and herds, for the laudable purpose of taking counsel together and stimulating each other to greater exertions for improvement, in the honorable calling of tilling the soil, the "critter" was found among them. Thinking, perhaps, that a "Cattle Show" would embrace every species of animals, wearing horns and hoofs, he made bold to enter.

In New England, the farmers' festival is a *temperance* gathering. So it will be elsewhere, when farmers generally understand the inseparable connexion between sobriety and thrift. Above the door of one building, I read "Ladies' Saloon," where refreshments of various kinds might be obtained. In another part of the enclosure was a stall, where eatables and *drinkables* were displayed. This must have been done with the approbation of the managers of the show. The triumph of the Maine Law ticket, in this city yesterday, gives an earnest of better things in future.

Allow me to mention in this connexion, one gratifying fact. President Pierce visited the show, during its progress. After looking at the various objects of curiosity, those who had him in charge, thinking to do him a special favor, conducted him into an office and set before him the intoxicating cup. The president, to his honor be it said, peremptorily declined.

Suffice it to say, this exhibition was highly creditable to the State, and furnishes abundant evidence that the cause of scientific agriculture is progressing in Maryland.

Yours, R. B. H.

Baltimore, Nov. 1, 1853.

For the New England Farmer.

OYSTER SHELL AND STONE LIME.

MR. EDITOR:—Can you, or some of your correspondents, give any information relative to the value of oyster shell lime, when compared with common barn-yard manure. I would also like to inquire if you have ever tested its value when used for cement. By answering the above inquiries you will confer a favor. B.

Proctorsville, R. I., Nov. 21, 1853.

REMARKS.—Will some of our correspondents who have the knowledge, reply?

For the New England Farmer.

POINTS ARE PINS.

BY A. G. COMINGS.

Once on a time, imagination has it, a grave debate arose concerning pins. Assembled and associate wisdom gave to the subject great importance; and those who were in the habit of making pins, with those who were accustomed to using pins, together sat and listened; while merchant princes and knights of the counter entered fiercely into the conflict.

There was something in the subject, *pin*, which was truly great. There was also something very small. These were pin-head, and pin-point. There was something long, but nothing short; and so was the grave debate; much talk, but no decision.

The world will not be harmed by knowing a little about how this great debate was carried on, so I will try to tell them; but if nobody ever heard or saw the like, they will perhaps hardly believe me. But they will pardon me, for I must copy a little after the debaters themselves, if I say things without wit or wisdom.

The contest about pins was not whether pins were of use; for this everybody knew; and where people had knowledge, there was no place for dedebate. Neither was it a question whether anybody manufactured pins; for the manufacturers were on the ground, to discover whatever might have an influence on their chosen occupation.

The whole debate was on the important question, "what constitutes a pin?" The debaters were divided into three classes, namely, the great pleaders, the long pleaders, and the sharp pleaders. The great debaters urged that the *head* was the chief end and substance of a pin—that a thing without a head was no more a pin than an old maid was a part of mankind. If you use one to attach one part of the web of humanity to another, it will not stay put; but will surely shove itself right out of place, because of being without a head. It would be difficult for me, unaccustomed as I am to reporting such great arguments, to do full justice to those who so forcibly argued that pin-head was pin.

The long pleaders suited their manner to their subject, and made long and polished speeches to prove that the bar constituted the pin. There was much in their pleas. So long arguments, however, I have not time now to report.

The sharp pleaders contended that the point was the essential and indispensable end and subject of a pin; so much so that the point really constituted it a pin.

From the three contending parties might be heard the cries, "*Head is pin;*"—"*Bar is pin;*"—"*Point is pin.*"

I was about to denounce the whole assembly—it was on my tongue to call them all a set of fools, making mockery of truth, when the genius of reflection addressed me saying, "utter no word of condemnation. You are a farmer. You are numbered among agricultural writers; and you can find folly to condemn in your own department. You may hear men crying, Head is pin,—Point is pin,—Bar is pin, among agricultural writers."

"Then I saw and considered it well; I looked upon it and received instruction."

There is a class of farmers who depend wholly

upon quantity, in the preparation or making of manure. They offer premiums to those who will make the *most* manure according to the amount of stock kept. They are continually crying "Head is pin." Now any fool can pile stuff together to make a heap; yet his heap of manure may be no more suited to supply the wants of the soil than a saw-dust pudding would be to meet the cravings of an empty stomach. There is something besides quantity to be considered, in making large heaps of compost. Bulky manures, large masses of old vegetable matter are as necessary to the soil as a head is to the pin. Without them the soil will certainly remain in as bad condition as any old maid in this wide world. You may dress it, and sigh over it; but it will bring forth nothing but grief and sadness. It will be barren. It must be married, that is, cultivated according to the natural laws of vegetable want, before it can be in any other condition than that of barrenness. The carbonaceous matter necessary to the maturity of a plant, and especially of a plant bearing seed, will not all be supplied from the air during the short life of the plant. Plants draw carbon from the atmosphere, but not in sufficient quantity to meet the wants of any thing more than dwarfs in vegetable life. More than ninety-eight pounds in every hundred pounds of wheat or rye grain belonged originally to water and air. These are driven off into the air by the process of burning. This is the pin-head to agriculture. An omission at this point, in our agriculture, will certainly prove unfortunate for us. But we may have ever so much old vegetable or carbonaceous matter in the soil, and not in the state it should be in to feed plants, or where the soil lacks the mineral or earthy ingredients of plants, and we may cry out pin-head is pin, as much as we will, we shall find that the crop fails of coming to maturity.

There is another set of men connected with agricultural papers and books who are continually crying, "Point is pin." They are from week to week making exhibition of the tables which chemists have prepared to show what the little end of vegetation is made of. That is, they give an analysis of the ashes of plants, and discourse untiringly upon the importance of supplying these substances, which are the elements of plants. Truly, the point of a pin is very necessary to the perfection of the pin; but these men may stand and cry, "Point is pin, Point is pin," as long as they please, in agricultural matters, and when I take off my hat to make a bow to them, on the high road of agricultural progress, they may expect it to be done in the style a Quaker would do it. The fact is, after all, that the chemical composition of the inorganic or earthly matter of vegetables and plants is only the little end of the greatest of all matters to a dependent world. It is to me a settled and certain fact that there are ninety-nine failures in crops from other causes about which little or nothing is said by the class of teachers referred to, where one such failure can be attributed to a lack of the requisite inorganic elements of plants. In the use of guano, superphosphate, plaster, salt, and lime, without supplying the soil with carbonaceous matter, men are imitating the sharp pleader, crying "Point is pin." Now all these are very valuable, and chemical analysis also; but we have had enough of making everything out of the little end of a thing.

The intelligent general management of a farm is, unquestionably, the most important of all things about farming. There are a class of farmers, however, who entirely abuse this idea, and contend that this is the whole matter. They despise all ideas of improvement, and all helps from abroad. We hear them incessantly crying, "Bar is pin." They care not for pin-head or pin-point. They want neither green crops nor meadow muck, neither guano nor any thing else.

So important is this matter, that I say without hesitation that I have no disposition to be satisfied with books or papers, on agriculture, which are not edited by men who are practical farmers. Others may tell us many good things, but they give us so many bad lessons at the same time, that they cannot be relied upon. Hence the strong objections to "Book farming." We want a pin to have a good head, a good point, and a well formed and polished bar. We want full views in agriculture, also. A. G. C.

Mason, N. H.

AGRICULTURE IN VIRGINIA.

The Editor of the *Boston Journal* not only loves the garden, and knows how to procure some of the finest fruits and flowers that are produced in this vicinity, but knows how, also, to benefit his readers by laying before them, in his daily *Journal*, many items of interest in relation to agriculture and horticulture. From his paper we copy the following account of the progress of Agriculture in the Old Dominion:—

AGRICULTURE IN VIRGINIA.—A State Agricultural Fair was recently held in Virginia, which appears by the published reports to have been the largest, most enthusiastic, and most interesting gathering of the kind ever held in this country, and one which promises to be of immense importance in advancing the interests of agriculturists in that State. We have had some brief accounts of this fair. It commenced on the 1st of November, when, however, only the officers and members of the Society were admitted within the enclosure. On the 2d, the gates were thrown open, and not less than twenty thousand of the best population of the State were admitted. Everybody was not merely gratified, but astonished, as well at the immense concourse as at the extraordinary display of the agricultural and mechanical resources of the State. The annual address was delivered by John R. Edmunds. On the 3d, there was a plowing match, at which Madame Sontag, the vocalist, gave $100 as a premium to the successful plow. Half the premium was given to the colored plowman, (a slave,) and half to the owner of the plow and team. On the 4th, the exhibition was brought to a close by the award of premiums, and these were by no means few nor small, and the valedictory address was pronounced by Ex-President Tyler.

But the most enthusiastic portion of the performance was exhibited in the nightly meetings of the Agricultural Society during the week, at Metropolitan Hall. Of this the *National Intelligencer* says:

"On the second night a proposition was introduced by Lewis E. Harvie, Esq., of Amelia, to

raise twenty thousand dollars, to be invested in State stocks, as a permanent endowment of the Society. This was responded to in the most enthusiastic terms, various gentleman putting down themselves and their whole families, to the third generation, as *life members* of the society, and others pledging their respective counties for from $500 to $1000. The meeting was protracted to the hour of twelve, and before adjourning the sum of thirty-nine thousand dollars had been raised!

The same scenes were enacted on Thursday and Friday nights, and the enthusiasm was kept up in a practical manner, until upwards of sixty thousand dollars were subscribed! A suggestion that the Legislature should be called upon for a subscription was promptly put down, several members declaring that the farmers of Virginia, now that their spirit was aroused, needed no help of that kind, but would rely on *themselves;* yet, during the proceeding, it was found that professional men, mechanics, and merchants, all claimed the right to aid in putting Virginia agriculture upon a firm and enduring basis. A wag declared that, so far from asking Legislative help, the society was now ready *to shave the State debt!"*

Think of this, farmers of Massachusetts! *Sixty thousand dollars* subscribed in two days to advance the cause of agriculture! Here is a spirit and example worthy of emulation. Virginia has heretofore displayed but few signs of healthy agricultural progress. Her farms and plantations have been cropped and cropped until they have become exhausted, and then have been abandoned. But we presume, one of the first effects of this agricultural furor, will be the introduction of new and improved modes of culture, by which the soil may be kept in heart, or reclaimed. The agricultural wealth and prospects of Virginia will thus receive an impetus which will place her on a par with other States whose natural resources are not so great in this important branch of industry. We look upon this fair as the dawning of a new and brighter day for Virginia.

For the New England Farmer.

TAR-WATER FOR THE ONION MAGGOT.

MR. BROWN:—As I have been a constant reader of your *Monthly Farmer* for a year past, and in it have noticed some remedies to save onions from being destroyed by the maggot, I thought, this last season, I would try one and see if it would do any good, as I have for several seasons past lost most of my onions by the maggot. Therefore, last spring, when I sowed my onions, I made the drills and sprinkled ground plaster into them first, then sowed the onion seed on the plaster, and covered it with the soil, and as soon as the onions were up five or six inches high, I procured two quarts of tar and put it into an old tin ten quart pail of water. I stirred the tar up and let it soak one day, then turned the tar water off into a sprinkler and sprinkled it over the onions about twice in a week, which saved the most of them, and larger and better onions I never raised in my life, they being the white silver skins. I lost a small part of them, I think, by not applying the tar water soon enough, as the maggot had got into a few before I began to make use of the tar water.

Yours respectfully, J. N.

Meredith Village, N. H., Nov. 15, 1853.

THANKSGIVING.

We have already uttered some thoughts in relation to this institution which annually unites, once more, the scattered households of our beloved New England. It is suggestive of many pleasant thoughts; arrests the current of worldly ambition, chastens the hot pursuit of gain, strengthens the ties of affection, and lifts our hearts in gratitude to HIM who knows all our wants, and who has abundantly supplied them.

In a former article we briefly spoke of the *Variety and Wealth of the Harvest.* We will now give a few moments to a consideration of *the Development of Agricultural Science.* This is a prominent cause of the variety and abundance of which we have already spoken. The cultivation of the earth has become a *Science* and lays under contribution many other sciences; all the natural sciences are its auxiliaries—botany, chemistry, geology, &c. A multitude of the best minds of this country and Europe are engaged in it. Many of our universities have a department assigned to it, and all, probably, eventually, will. Some of the State governments have organized an agricultural Department; while others have the subject under consideration; and even the national government would have had a Bureau of Agriculture, ere this, if the politicians could have spared time from their party tactics. But the farmers—three-fourths of the voters—will soon call their attention to the subject. What an amount of talent will these great organizations turn to this chief industrial pursuit! Every experiment, discovery, or improved method, in any corner of the country, will immediately be made universal. And then what a multitude of local societies to reduce to practice all this knowledge, correct it and confirm it by experiment! It is an *Art* as well as a *Science;* and it is a fine art, as well as a useful. It covers the land with beauty as well as riches, and what is not the least benefit, this pursuit is elevated from a mill-horse round of toil to an intellectual pursuit, to a pursuit of taste and refinement. A Farmer's Club in a town, in its weekly discussions through the winter, will do as much to cultivate their minds as their farms. How much superior to the old practice of drinking cider and telling stories at their nightly gatherings.

Another blessing of vast importance to our comfort, is the *elevation of the Mechanic Arts.* They are elevated in more senses than one. They are elevated in dignity. In early times, the trades were badges of servitude—only the slaves and serfs were mechanics! The mechanical part we now perform by machinery raises more individuals into the character of overseers. We have greatly improved upon the ancients. They made war upon their neighbors and took the vanquished to do their menial work We have pressed the elements into our service, which God made for that very

purpose. We have made the flaming fire draw our chariots, the wild torrent of the hills turn our spindles, and let the weary steed and the oppressed captive go free. Labor is now raised to the dignity of an intellectual pursuit. The engineer, and even the factory girl tending her looms, are raised to the position and emolument of overseers.

The mechanic Arts have conferred vast benefits upon agricultural pursuits; they are also elevated in the elegance and abundance of their products. Contrast the elegant cutlery and glass which now grace the tables of all classes, with the wooden and pewter plates and spoons of even forty years ago—the carpets and papered walls, even of the poorest now, with the sanded floors and smoky wainscotting of the most wealthy then! Compare the busy housewife, drawing out her solitary thread month after month, to clothe her family, with the modern factory—its polished machinery moving like the planetary system, and with almost as much silence and velocity! Compare the quality, variety, and elegance of fabrics now, and their prices fifty years ago.

The effect of these improvements cannot be otherwise than beneficial. A great increase of comforts, and a great diminution of coarse, hard labor, must tend to raise and refine society. It will be felt more by the poorer classes; for the wealthy never were condemned to want and drudgery. Released from the more wearing labor, and one person being able to do the work of forty, they must necessarily have more time for social and mental enjoyment and improvement.

We have thus enumerated a few of the blessings which demand our gratitude and thanksgiving; others, without number, are constantly flowing in upon us. The possession of this beautiful heritage which God has given us, with its healthful mountains and fertilizing streams; its variety of climate and varied productions of soil in different latitudes; the Union and harmony of the States, our noble institutions, and the independent and wholesome municipal regulations of the towns. These are blessings known by no other people in the degree which we enjoy them.

May they find a lively response in every heart, and influence us all to be anxious for ourselves *less*, and seek the happiness of others *more*.

Autumn Transplanting of Fruit Trees.—*Hovey's Magizine* gives the following reasons why autumn transplanting is preferable to that of spring, on all soils in good condition for the growth of fruit-trees, and they should be planted in no other:

Autumn planting is better than spring for the following reasons:

1. The time is longer than spring.
2. The ground is in better condition.
3. The trees are then in the most dormant state.
4. The roots, where cut, heal better, and are prepared to send out fresh ones even before the frost is out of the ground.
5. The winter and spring rain settles the earth around the roots.
6. The trees are well established before warm weather overtakes them.

For the New England Farmer.

RAILROAD STOCKHOLDERS BENEFACTORS TO THE COUNTRY.

Messrs. Editors:—It is a fact that the original stockholders of Turnpike roads, Canals and Railroads, as a general thing, have benefited the public and injured themselves, that is, if we consider the money spent by individuals for the good of the public, a loss. Very few of the enterprising men who have gone ahead in making new discoveries and public improvements have been rewarded with anything like an equivalent for their services except the gratification every benevolent man feels at doing good. From before the days of Elijah the prophet down to the days of Columbus, and then to the present time, the prophets, astronomers, inventors of printing and numerous other public benefactors, have not been treated with marks of esteem or extrinsic politeness by the greater mass of mankind.

At the commencement of railroad making in this country erroneous opinions were formed by many people who were suspicious that some kind of a monster monopoly was about to take place to trespass upon individual interest and deprive them of their rights, and that railroad corporations would enrich themselves on the "spoils" of the travelling public. It is true that the railroad mania commenced among wealthy men of an enterprising description, who were willing to hazard in a game which promised novelty if not riches, and it is also true that other rich men, differently organized, would not vest a dollar in any direction unless in stocks where they were sure of being the better by 9 or 12 per cent. interest. Many of the landholders in the country, influenced by the clamor of interested persons, obstinately refused to sell their land at any rational price when a railroad would enhance the value of their property to more than double its former value. That same bigotry which has in all ages been the annoyance of every enterprise, seemed to revive and show its hideous figures as late as the 19th century. The stockholders in railroads acting from the motives of gain, novelty, public benevolence or from whatever influences have been among the greatest benefactors to the farming interest as well as every other interest, *except their own*, in the country. The original stockholders have "beat the bush" and the farmers, speculators and non-stockholding business public, have caught the bird The stockholders are accountable for every expense, liable for every damage through carelessness of officers, and accidents, are prosecuted for every little injury of person or property, and fined without mercy by an unfeeling jury for frightening "distressed damsels," including other mishaps to the end of the chapter of misfortunes. On the other hand, the non-stockholding, riding public, have no risk to run only the risk of bruises, broken bones, broken necks, and strangulation and suffocation under drawbridges and in muddy streams,

which calamities are not much thought of provided there is steam enough put on to produce the desired speed.

On the whole, the land proprietors and those who have not lifted a finger to aid in the construction of railroads have received the benefit in the rise of their lands and the cheapness of conveyance of persons and freight, too much at the expense of enterprising stockholders, who are spectators of the success of their philanthrophic schemes to benefit their country. According to the weekly sales of stocks in railroads very few of them pay as high as 6 per cent. per annum on the shares, and more which pay but little or nothing; but still the stockholders ought to feel well rewarded for the accomplisment of their successful enterprises in acts of benevolence.

It is to be regreted that railroad corporations have not better feelings toward each other; if they were disposed to assist, instead of exercising a baleful competition to injura each other, it would be more in Christian character, and more to the pecuniary advantage of all parties. Where there is litigation there is always waste, and the directors of railroads would do well to have as little money as possible spent in ill nature, that the deserving stockholders might have more to compensate them for the risk they have run and the expenses they have been at. I hope the millennium among railroad corporations will soon take place, when they will sit down in smiling repose together, (I do not mean on the track,) when there shall be no disagreement among them to cause injury to either party, when they shall all agree in equitable charges for passengers and freight that railroad conveyance throughout the country may be sustained without bearing too heavily upon an enterprising class of citizens. This warfare of driving one another from the field generally costs more than it comes to; the ground is generally purchased at a dearer rate than it would cost by treaty. Christian policy is the best, after all. SILAS BROWN.

Wilmington, 1853.

N. B. I have made assertions in the above communication, if doubted, I think I can prove by statistics which are omitted in this that the communication should not occupy more than its share of room.

DOUBLE, OR MICHIGAN PLOW.

The *Albany Cultivator*, in reply to questions of a correspondent, says:—"The Michigan Plow, which is strictly a *trench*-plow, is a capital implement, but it requires nearly double the amount of team to draw it, that is needed for a common plow of corresponding size."

We have given the double plow a pretty fair trial on our own farm, and have conversed with several excellent plowmen, in regard to the amount of power required for this plow, compared with one having a single mould-board, and the opinion is common that the double plow requires *no more power*, if, indeed, it does quite as much, to do the same amount of work. We plow a furrow eight and nine inches in depth by ten inches wide, with two pair of oxen, on a stiff sward land, where it has always required the same team to plow the same depth and width with a single plow. But we have great confidence in the knowledge of the editor of the *Cultivator* in agricultural dynamics, and hope he will explain to us the reasons for his opinions.

For the New England Farmer.

FALL PLOWING, &C.

MR. EDITOR:—Much has been written and said of late, on the subject of "Fall Plowing," as whether advisable or not. Some contend that it is a great advantage to plow ground wanted for spring crops in the fall, while others say very little or no soil should lie exposed to the frosts of winter in a plowed state. Our experience leads us to say that fall plowing is a benefit and an advantage according to circumstances. Some eight or nine years ago, we turned over a homestead meadow just before winter set in, and in that condition it lay till spring. We endeavored to plow as near six inches deep as we could, and as the work was done with the "Prouty Plow," it was, of course, well turned over. The soil was an upland old sward which had not been plowed for some thirty years. In the spring the soil was levelled down with the roller and harrowed without plowing, and planted to corn, when a heavy crop was produced. No manure was plowed in the fall previous, nor was any used in the spring excepting some compost, which was spread on the gravel knolls. Since that time we have turned over meadows in the same way, and in the spring spread on a heavy coat of fresh manure, mixing and covering it as well as we could with the harrow, and not plowing it again for fear of tearing up the old sward. In this way fine crops of corn and potatoes have been produced at small expense of labor But a better way, we think, would be, to give the old meadow or sward a good covering of stable or dung manure, turning it down six or eight inches deep, and letting it lay till spring. Still, as stable or dung manure is not generally at hand in the fall, a good way is to get the manure all out on to the sward, or meadow, in the spring, and then in the first of May, spread and turn the manure all down with a six or eight inch furrow. We consider the difference betwixt fall and spring plowing, as being more with the convenience of the farmer as to time, than whether the soil shall be killed by one process, or cured by another. Both plans have their peculiar advantages—fall plowing in breaking down old swards that are inclining to stiff clay, and exposing a multitude of larvæ of insects to killing frosts, while spring plowing has all the advantages peculiar to itself. All farmers of "progress" go in for deep plowing. And yet we think a great deal of unnecessary talk has been made as to know just how long time it shall take to get down to a certain depth of soil, say ten inches. There is little danger that a farmer will plow an old field at a depth of eight or ten inches the first time, unless it should be done by the double plowing of surface and subsoiling. We never have yet seen an acre of soil, whether it be a good soil or an old, barren soil, that ever was injured in the long run by deep plowing. Others may have seen directly to the contrary, and if so, then all very well. Take an old barren field and plow it eight inches deep, the first time, and the subsoil brought to the sur-

face will have a sterile appearance. In that case the manure or most of it, should be spread upon the surface and worked into the soil with the harrow and cultivator. This top or subsoil, after it has undergone the action of the sun, air and rains together with the workings of the harrow, cultivator and hoes will become as good, or even better than the top soil turned to the bottom of the furrow, by the end of the season. We think as much will be gained in deepening the soil for a permanent improvement in one season in this way, as would be gained in two or three years by lowering the plowing an inch or two in a season. On many farms the soil is so uniform that one kind of plow, and other implements, to match is all that will be necessary for the farmer to have, if they are of the right kind, such as "Prouty's" or "Ruggles" pattern. A good sward plow will be a good plow to plow mellow or stock ground, as we have found after ten years trial. Many teachers will say, that you must have one plow to plow sward ground and another to plow mellow ground, one to plow flat surfaces, and another to plow lapped furrows, and so on. Now there is no objection that we can raise to farmers having all these plows if they feel so disposed. But three or four plows of the right stamp, costing from eight to ten dollars a plow, makes a handsome sum when put together. If every person averages one good plow, it will be more than we shall expect to see in the next ten years to come. Of course we do not mean to say that all soils should be plowed with one plow, it will vary of course, according to circumstances. But a plow that will turn a furrow eleven or twelve inches in width, may do the work just as effectually as one turning a 7 or 8 inch furrow. The difference is not so much in the width of the furrow slice cut, as it is in the manner in which the work is done. The difference would be a quarter or a third more furrow slices in a field, in one case, than the other, but no difference in the yield of the crop will be seen. The same principle may be applied to mellow plowing, a heavy plow could work the soil over just as effectually as a light plow, and at the same time do the work much faster with economy of time. Yours, &c., L. DURAND.

Derby, Ct., Nov. 29, 1853.

JAMES E. TESCHMACHER.

One after another, the good and the useful are taken from us, while yet in the midst of life and health, leaving wide chasms in the ranks of those devoted to our beloved Art. Even if they were fully ripe, like a shock of corn in its season, and their days of active usefulness were over, we should scarcely know how to spare them; but when cut down suddenly, taken from our sides, as it were, while laboring in our accustomed fields, it deeply impresses us with the sublunary nature—even of the richest and the best of all things here. While we cherish their memory, therefore, in our deepest heart, we will do as they would probably have advised us, press on with duty, whatever it may be, and endeavor to add as many real blessings to the world as they have added.

At a special meeting of the Massachusetts Horticultural Society, held on the 12th day of November, 1853, the death of JAMES E. TESCHMACHER was announced by Samuel Walker, of Roxbury, (late President of the Society.)

On motion, the President, J. S. Cabot, of Salem, appointed Samuel Walker, William S. King, and B. V. French, a Committee to draft resolutions expressive of the sense of the Society upon their loss.

The Committee reported the following preamble and resolutions, which were adopted:

Whereas, God in his Providence has called from this scene of his labors, in the fulness of his strength, and suddenly, without premonition, our beloved associate, James E. Teschmacher—it is

Resolved, That the Massachusetts Horticultural Society, while they acknowledge the inscrutable wisdom of God, and bow before this solemn evidence of his power, deeply and sincerely mourn the loss they have sustained. In Mr. Teschmacher this Society possessed an accomplished and experienced horticulturist, a wise and cautious adviser, and an active and useful member; while each of us, his late associates, ever found in him an intelligent, interesting and unpretending companion, an honorable man and a firm friend.

Resolved, That in his death, Science, Literature and the Arts have been deprived of an earnest student and a faithful expounder—one ever anxious to learn, and always willing to impart knowledge.

Resolved, That, in token of esteem for the character and acquirements of our late associate, and of sorrow for his loss, the members of this Society will wear the usual badge of mourning for thirty days.

Resolved, That we tender our sympathy to his bereaved widow and family; and that the President of the Society be requested to transmit to them a copy of the Preamble and Resolutions; and that the same be published.

The Society then, as a further mark of respect, immediately adjourned.

HUMUS.

The fertility of a soil is generally considered to depend upon the quantity of *humus* it contains. No matter how efficient it may be in organic substances, a portion of organic matter is indispensably requisite to ensure productiveness. The best and most economical method of supplying *humus* to soil, perhaps, is by turning in green crops.—When this method of amelioration is adopted, the vegetables selected for turning in should be such as derive the most of their nourishment from the atmosphere, or in other words those which are least exhausting to the soil in which they grow. Up to the period of inflorescence, buckwheat, peas, clover, and a variety of other plants classified in the same category, draw but slightly from the soil, the economy of nature being such in regard to them, that a comparatively small amount of aliment is demanded from this source. Hence it is that soils which are nearly or quite deficient of vegetable energy, are abundantly capable of producing a large amount of haulm, though they would necessarily fail to perfect a crop of grain. When buckwheat, peas, clover, etc., are inhumed

by being carefully and systematically turned in by the plow, and imbedded in the soil, the vegetable organism is immediately broken up, and converted into *humus* on vegetable food: the fermentation or putrefactive process, requisite to this result being completed with greater or less rapidity, according to the state of the weather, and the character and condition of the crop at the time of turning it down. The gaseous products of the fermenting mass are imbibed readily, and with great facility by the soil, while the other products—viz: those of a solid or fluid character, if permitted to remain undisturbed, are speedily incorporated and mixed with it. But should the soil be again plowed before the process of decomposition has been thoroughly perfected, as is too often the case, especially when a dry crop is to succeed a green one, much the larger portion of the gaseous, and not a small per centum of the fluid products, will be dissipated, and of course lost to the soil. It is therefore a good plan to turn in the green crop with a deep furrow, and prepare the surface for the reception of the seed to be sown, by harrowing, as the plow goes too deep for profit, and prevents thereby, to a certain extent, the very results it is intended to produce. A writer in one of our most popular agricultural publications, discussing the importance to the farmer, of this system of amelioration on light arenaceous soils, says:—

"In order to obviate wastage, and to render the mass more speedily and effectually available to the growing plants, it is recommended before turning the ameliorating mass, from twenty to twenty-five bushels of lime to the acre be applied. This, by its powerful action upon the buried fibres and foliage, will induce a vigorous and rapid fermentation, and as the lime will immediately absorb and fix the carbonic acid, one of the most important products of vegetable decomposition, as well as form a ready combination with the vegetable matter of the mass, its application is highly essential in order to obviate unnecessary waste, and to facilitate both the decomposition of the haulm, and the appropriation of its fructifying products, by the intended crop. Lands of a light, arenaceous texture are often indebted for their supposed incorrigible sterility and unproductiveness to the predominance of noxious acids or salts. These are sometimes innate to the soil, though more commonly produced by the application of matters intended as manures. But whatever their origin or character, they are speedily neutralized and rendered perfectly inoxious by lime. Should there be extant any original or insoluble humus in the soil, it will also, by the efficacious action of this mineral, be converted into a salutary and highly nutritious pabulum, or food for the succeeding crop."

On clayey lands, the turning in of green crops has a tendency to break the cohesiveness which is one of the principal causes which render them unproductive. We are of course speaking of soils characterized by a vastly preponderating amount of aluminous matter, and not of that more common and valuable description of lands, known as clayey loams. These are so constituted as rarely to demand any effort whatever on the part of the cultivator, to change their constitutional character, and are generally capacified for productiveness, if but a slight quantity of manure is applied, annually, to the crops they are required to produce. But in all tenacious, viscid and retentive clays, which require loosening, the fermentation of a green crop, produces highly beneficial results. It also communicates to the soil many principles of which it was before deficient: such, for instance, as the inorganic elements of vegetation, and assists powerfully, in rendering soluble, and therefore appropriable, the insoluble substances it previously contained. On this account, unfermented manure is always beneficial to such soils, and productive of the most obvious effects, both on the soil and crops.

For the New England Farmer.

RAIN IN A YEAR—SLACKING LIME.

MR. EDITOR:—Will you or some of your correspondents who have a rain guage, please inform me through the *Farmer*, the quantity that usually falls in a year? (*a.*)

How much water should be applied to lime when slacked, for agricultural purposes, and how much salt should be added to the water? (*b.*)

How much of the slacked lime ought to be added to a cord of muck to be used as a dressing for potatoes in the hills. (*c.*) Please answer and oblige.

S. TENNY.

E. Raymond, Me.

REMARKS. (*a.*)—The amount of rain falling in the course of a year varies in different places. In an English work, we find the statement to be,

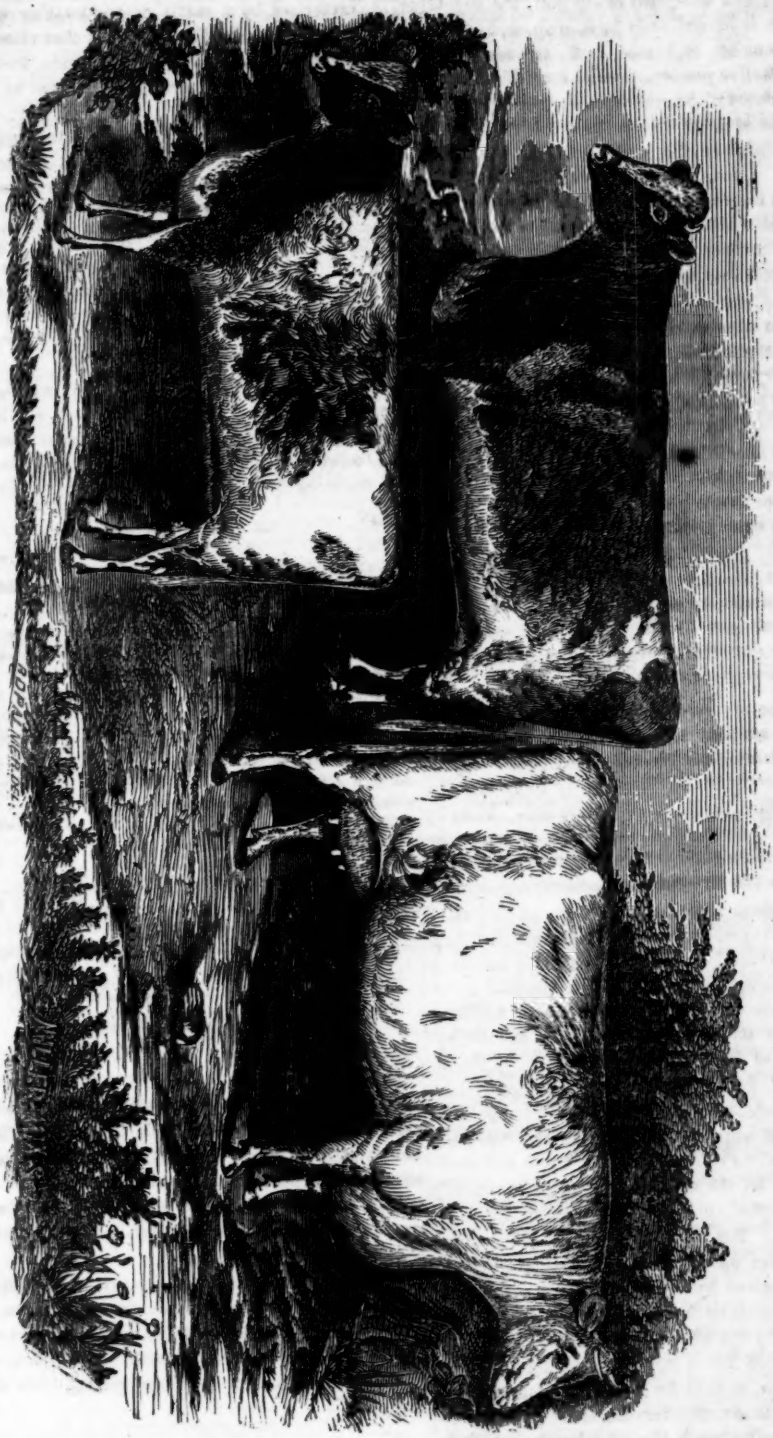
Under the tropics of the New World	115 inches.
" " " Old World	76 "
Within the tropics generally	95½ "
In the temperate zone of the New World, (United States,)	37 "
Of the Old World	31½ "
Generally	34½ "

We have no reliable tables at hand to show the amount of rain falling annuhlly in the New England States, but have supposed it to be not quite so much, (including snow) as stated above.

(*b.*) Add salt to water so long as the water will dissolve it, then wet the lime with it until the mass falls in a fine powder.

(*c.*) Add equal to a cask, at least, of unslacked lime to each cord of meadow muck; and more, if lime comes to you at a cheap rate. The whole should then be worked over most thoroughly, so that all the muck may be impregnated with the lime.

☞ In Buffalo, one firm alone have sold and shipped over four thousand barrels of apples this fall.



SHORT HORN, OR DURHAM HEIFERS.

SHORT HORN, OR DURHAM HEIFERS.

The *Short Horned Cattle*, under which denomition are included the *Holderness* and *Teeswater* breeds, have been supposed to have derived their origin from a cross with some large bulls that were imported a century ago, from Holland into Yorkshire, and in the east and north parts of which country the two latter breeds had been long established and deservedly esteemed.

The cattle are of a good size, and are beautifully mottled with red spots upon a white ground; their backs are level; the throat clean; the neck fine, but not too thin, especially towards the shoulder; the carcass full and round; the quarters long; and the hips and rump even and wide. They stand rather high on their legs, but this must be carried to a very little extent; they handle very kindly, are light in their bone, in proportion to their size, and have a very fine coat and mellow hide. They possess the valuable properties of fattening kindly at an early age, and of yielding large quantities of milk.

There is considerable diversity of opinion as to what breed of cattle is best for the yoke, the shambles and for milk; but we believe that whoever rears and feeds well the Short Horns, will have no cause to complain of them for either of the objects mentioned above.

For the New England Farmer.

BIRDS OF NEW ENGLAND.

THEIR PAST AND PRESENT HISTORY.....No. 8.

BY S. P. FOWLER.

The American Robin is found throughout the whole of the North American continent. Its habits are so well known to every one, that no description is here necessary. The claim, which this bird is supposed to have upon our protection, in consequence of its feeding on insects, is, we fear, not well founded. We have noticed some controversy in our horticultural journals upon this point, and are sorry to be compelled to take the unpopular side of this question, against the claims of the robin, as a bird, useful to the farmer and horticulturist. The Redbreast is a thrush, feeding for the es; sometimes, and perhaps from necessity, upon insects. We had proceeded thus far in our communication, when a female friend looking over our shoulder, exclaimed, you certainly do not intend to give the robin a bad name, and publish it to the world, by sending it to the editor of the *New England Farmer*. I replied, you would not have me exhibit the character of the robin, to our farmers and horticulturists, in a more favorable light than the truth would warrant. You wrong me in supposing any such thing. Wrong you, quoth our fair friend, her sympathy for the good name of her favorite bird, being now fully enlisted; who has wronged you? certainly, I have not, it is you, that has wronged the dear Robin-red-breast, that covered with leaves the babes in the wood, and whose innocence and social habits, have so long been sung in pastoral poetry, and nursery rhymes. I had reason to expect, sir, something better of you, than this, after all your assertions of love for our birds. And as to robins not eating insects, you certainly are mistaken, for I have noticed them several times, the past summer, feeding their young with worms. Ah! my dear, but the earth worms, which you saw in the robins' mouths are not insects, and I am sorry here to notice your ignorance. And I am unwilling that your robins should destroy them, as they are entirely harmless, and useful in pulverizing and preparing the soil for plants. And I am constrained to say, that after many years' observation, I do not hesitate to pronounce the robin as the greatest of all pests to the cultivators of fruit, not even excepting that personification of mischief to the horticulturist, the Cherry Bird. It begins by committing its depredations on the first fruit ripe in the garden, and continues to do so, until the last is gathered. There are also many trees, shrubs and plants, whose fine appearance in Autumn, depending principally upon their scarlet fruit, that are deprived of all their beauty by robins, in their eager desire to obtain the berries as soon as ripe. There is hardly anything in the shape of small fruits or berries they refuse. We have seen them feed upon the berries of the Buckthorn and Arum, notwithstanding they were made to feel their drastic powers. They also devour Poke-berries, until their very flesh is stained with their crimson juices. The claim which the robin may be supposed to have on our sympathies, in consequence of its relation to its English namesake, is, in our opinion, rather slight. The English robin is smaller than ours, and resembles it in nothing but its red breast. It cannot, I think, be any nearer related to your favorite bird, than fifth cousin. And now, although truth has compelled us thus to speak of the robin's habits, we do not wish to be understood as entertaining any murderous feelings towards him, such for instance, as would, under any circumstances, however provoking, tempt us to shoot him. No, nothing shall move us to harm "the little bird with bosom red," for notwithstanding "all their faults, we love them still." We will continue to cherish and protect them, for the honest confidence they manifest toward us, for their pleasant and vigorous note, on a bright and beautiful spring morning, and for the interest and beauty they impart, in common with other birds, to the landscape and garden. We will protect them, in fine, for the love we entertain for all birds; the love of an ornithologist, so ardent and strong, like that which prompted in view of death, the author of the American Ornithology, Alexander Wilson, to exclaim, "bury me where the birds will sing over my grave." The next bird, which will claim our attention is the King-bird, who stands at the head of the Fly-catcher tribe. His habits are well known to every farmer, and he is distinguished for his love for the honey bee, and his fondness for seeking every opportunity to tease a hawk or crow. This constant habit of the king-bird, in attacking birds of prey, and driving them from the precints of the farm-yard, together with his feeding upon insects, renders him of service to the farmer, and more than counterbalances the mischief he sometimes occasions, by his fondness for honey bees. We cannot do better, in vindication of the character of the king-bird, than to quote the language of Mr. Wilson, who says "the

death of every King-bird is an actual loss to the farmer, by multiplying the numbers of destructive insects, and encouraging the depredations of crows, hawks and eagles. For myself, I must say, that the king-bird possesses no common share of my regard. I honor this little bird, for his extreme affection for his young; for his contempt of danger, and unexampled intrepidity."

Mr. Wilson continues, "as a friend to this persecuted bird, and an enemy to prejudices of every description, will the reader allow me to set this matter in a somewhat clearer and stronger light, by presenting him with a short poetical epitome of the King-bird's history!"

"Soft sits his brooding mate, her guardian he,
Perched on the top of some tall, neighboring tree,
Thence, from the thicket to the concave skies,
His watchful eye around unceasing flies.
Wrens, Thrushes, Warblers, startled at his note,
Fly in a fright the consecrated spot.
He drives the plundering Jay, with honest scorn,
Back to his woods; the Mocker to his thorn;
Sweeps round the Cuckoo, as the thief retreats;
Attacks the Crow; the diving Hawk defeats;
Darts on the Eagle downward from afar,
And, 'midst the clouds, prolongs the whirling war.
All danger o'er, he hastens back elate,
To guard his post, and feed his faithful mate.
Behold him now, his family flown,
Meek, unassuming, silent and alone;
Lured by the well-known hum of favorite bees,
As slow he hovers o'er the garden trees;
[For all have failings, passions, whims that lead
Some favorite wish, some appetite to feed;]
Straight he alights, and, from the pear-tree spies
The circling stream of humming insects rise;
Selects his prey; darts on the busy brood,
And shrilly twitters o'er his savory food.
Ah! ill-timed triumph! direful note to thee,
That guides the murderer to the fatal tree;
See where he skulks! and takes his gloomy stand,
The deep charged musket hanging in his hand,
And gaunt for blood, he leans it on a rest,
Prepared, and pointed at thy snow-white breast.
Ah, friend! good friend! forbear that barbarous deed,
Against it valor, goodness, pity, plead;
If e'er a family's griefs, a widow's woe,
Have reached thy soul, in mercy let him go!
Yet should the tear of pity nought avail,
Let *interest speak*, let *gratitude* prevail;
Kill not thy friend, who thy whole harvest shields,
And sweeps ten thousand vermin from thy fields;
Think how this dauntless bird, thy poultry's guard,
Drove every Hawk and Eagle from thy yard;
Watched round thy cattle as they fed, and slew
The hungry, blackening swarms that round them flew.
Some small return—some little right resign,
And spare *his* life, whose services are thine!
—I plead in vain! Amid the bursting roar,
The poor, lost King-bird welters in his gore."

Another bird of the Fly-catcher tribe, we shall now notice, is the Pewee, a loitering fellow, with a drawling note, which some would think indicating great laziness. But upon a better acquaintance, his note would no longer be considered lackadaisical, but simply pensive, without affectation. He certainly loves his ease, and spends many a warm sultry summer's day perched upon a dry branch of an old oak, in apparent listlessness, but not unmindful of the hum and motion of the insect world around him; occasionally launching forth into the bright sunshine, to secure some passing fly or small wild bee, and again returning to his perch in the shade. The Pewee feeds upon insects when they are to be obtained, and when these fail, in Autumn, upon wild berries. There are in New England several species of these birds to be found. These are the Pewet, Fly-catcher, or Phebe, River-sided Fly-catcher or Pe-pe, Wood Pewe, and small Pewee. The farmer has no reason to complain of their habits. The Cedar-bird, perhaps better known as the Cherry-bird, is distinguished for its beautiful silky plumage, the gentle fondness of its disposition, and its gluttonous habits. They arrive from the south about the first of April, and feed principally upon insects, until the ripening of the mulberries and cherries. At this period, they are well known as great pests in the fruit garden. And should we stop here, in our investigation into the character of the Cherry-bird, we should be compelled to admit, they had but little to recommend them to the tender mercies of the cultivators of May Duke's. But we are happy however to notice, that the usefulness of this bird to the cultivators of fruit, is at the present time more generally admitted, than it was when Mr. Wilson wrote its history. The author supposed that the use of the Cherry-bird to the farmer consisted principally in their agency in transporting various kinds of seeds and berries, on which they feed, the action of the stomach not injuring their vegetative powers. In other respects however, their usefulness to the farmer may be questioned; and in the general chorus of the feathered songsters, they can scarcely be said to take a part. We must rank them therefore, far below many more homely and minute warblers, their neighbors, whom Providence seems to have formed, both as allies to protect the property of the husbandman from devouring insects, and as musicians to cheer him while engaged in the labors of the field, with their innocent and delighful melody." Such was Mr. Wilson's opinion of the merits of the Cherry-bird. Since this distingished ornithologist's time, the character of this bird is in better repute, we trust, among intelligent and discerning horticulturists. It having been found, at least in the towns and cities in the eastern part of Massachusetts, that the Cherry-bird is very useful in destroying the canker worms. The period from their arrival, which we have said, is about the first of April, to the time of their pairing, which takes place the first of June, is spent by these birds, congregated in small flocks, in procuring their insect food, principally canker worms, and small caterpillars, And in this connection, we would notice the social habits of the Cedar-bird, as observed by ourselves, as well as others. We have seen a flock, containing some six or eight of these birds, after having silently fed upon the canker worm to repletion, seat themselves in a row on a dry limb, in a state of listlessness, pluming their wings, and occasionally lisping their feeble note, and thus quietly digesting their meal. Presently, one of their number, more vigilant than the rest, discovers at a short distance from the perch, a well-fed insect, which he at once seizes, and politely presents to his neighbor on his right, who, declining to partake of it passes it to the next, who also refuses to eat it, and it is in this way, sometimes passed round several times, before one can be found to accept it. Notwithstanding this disinterested trait in the character of the Cherry-bird, they are sometimes gluttonous in the ex-

treme, gorging themselves with fruit, until no more can be swallowed, and even in some cases, filling their throats so full, as to cause suffocation, resulting in death. Although we have said in this communication, that these birds are the personification of mischief to the cultivators of fruit, more especially the cherry, yet, in view of the many insects, particularly that pestiferious one, the canker worm, which they destroy from the time of their first arrival, to the ripening of our early fruits, we should pause when meditating some murderous design upon their lives.

S. P. F.

Danversport, Nov. 18th, 1853.

[TO BE CONTINUED.]

For the New England Farmer

"SOMETHING NEW—GUANO."

MR. EDITOR:—I have recently seen it asserted, by gentlemen claiming to have superior intelligence in matters agricultural, that an article written for publication, was not worth publishing, "on the ground of its not suggesting anything essentially new on the topics treated."

An ambition to show off some new thing, is the rock on which many founder. It seems to me, to put forth ideas useful and practical, in a manner calculated to convince the understanding, is an effort much more deserving approbation, than simply showing something new. These new theories, and speculative notions, are the bane of all useful improvement. Take for instance, the accounts that have been given of the application of *guano*, to the growing of crops in New-England. How many have succeeded to their expectation by such application? One in ten, perhaps. When they do succeed, proclamation is made of their success. When, they do not, it is carefully kept in the back ground. Beyond question, there is much virtue in this fertilizing material—but it can only be used to advantage—by those who know how to use it.

One of my neighbors, a gentleman of high standing in the community, owning a farm of 200 acres, on which he has expended at least $100 an acre—besides the first cost, for which his father paid, set about raising a better crop of grass than any of his neighbors. Accordingly he selected a couple of acres of meadow-land, turned it over, pulverized it fully, and put on a liberal dressing of *guano*, and sowed his grass seed. The consequence was, his seed came up, and there it stopped—and when the time for mowing came, there was nothing to be mowed, while his neighbor, having a meadow of like character adjoining, plowed it as usual, and applied a fair dressing of compost, costing much less than the guano—and there grew more than *three tons* of hay to the acre, the present season. So much for *something new*—without understanding it.

A CONSTANT OBSERVER.

REMARKS.—How could the knowledge of the proper use of guano ever be acquired without the aid of experiments? We believe judicious experiments are doing much for the farmer, while we deprecate that foolish *pride of opinion* which prevents a person, about engaging in such a work as you have described, from making proper inquiries of those more familiar with the use of guano than himself.

THE WINTERING OF STOCK.

Taking the last census as the basis of the calculation, and there are at this time about six hundred million dollars worth of live stock in the United States. Their value exceeds that of all the manufacturing establishments in the country, and also exceeds the capital employed in commerce, both inland and foreign. Live stock is an immense national interest, but one which has been sadly overlooked by American statesmen and writers on public economy. How to winter cattle, horses, hogs, sheep, and poultry in the most economical way, all things considered, is a subject on which an instructive volume might be written.

The science of animal physiology sheds much light on the business of keeping live stock, both in winter and summer; and if properly studied in its bearings on this great interst, would add indefinite millions to the income of farmers, and the wealth of the nation. But how can we pursuade our readers to study animal physiology in connection with the production of the flesh of their domestic animals? It is impossible to show them the valuable fruits of any science relating to husbandry before its seeds are permitted to be planted and cultivated in any State in the Union. Nevertheless, as the truths of science and the truths of empiricism never contradict each other, many learn by the latter not a little of the wisdom taught by the former. Thus science informs us *why it is* that cattle and other animals subsist on less food in winter, and keep in better order, if well stabled or housed, and regularly fed, than they will if subjected to the rigors of cold storms, snow, rain, mud, and irregular feeding. The latter system consumes both forage and flesh needlessly, and, of course, involves a prodigious loss to such as follow it.

Warmth is the equivalent of food, because food is used in the bodies of all animals to generate what we call animal heat. How far warm stables will save hay, grain, roots, corn-stalks, and other food of domestic animals, is not known; but a number of experiments lead to the conclusion that one-third may thus be saved with advantage to stock. A man at work out in the cold of winter, needs double the food that would serve him if he remained idle in a warm room through the winter; and the same is true of an ox or horse. A large share of all domestic animals do not work, and are kept for the production of flesh, milk, or wool. They need a reasonable amount of exercise to preserve their health, as well as good keeping in the matters of food, drink and shelter.

In wintering hogs, true economy requires that one should keep no more than will give the maximum of flesh for the food consumed. To keep a pig without his gaining in weight involves not only the loss of the food he consumes, but all the injury resulting from stunting his growth. Few are aware of the damage done to young animals by prematurely arresting the growth of their bones and muscles. A stunted pig, calf, colt, or lamb has received an irreparable injury. You can no more fully make amends for the shock given to the vital functions, than you can give a horse a new

seeing eye in place of one that has been put out by violence. No after-feeding of a horse will give him a new eye; and no good keeping will develope an animal frame perfect in all its parts after it has been stunted in youth.

Most farmers attempt to keep too much stock, both in winter and summer, for their food to be manufactured into flesh, dairy products, or wool. A few superior animals well housed in winter, and well fed at all times, yield the largest profit. Of course, stables should be properly ventilated that all animals may have a full supply of pure air. Most stables, and all sheds, give too much of it, especially in cold wintry weather. Look out for a plenty of straw, or other litter, to absorb all urine, unless you have a tank or other reservoir for it to run into. Manure is now as valuable as money at ten per cent. compound interest; for all the crops that manure aids so much in their annual growth sell at high prices. It costs nearly as much to plow, plant, hoe, and harvest an acre of corn to obtain 25 bushels as 50 bushels; and manure will double the crop.—*Genesee Farmer.*

For the New England Farmer.

UPLAND CRANBERRY.

MESSRS. EDITORS:—I some time since informed you that I had on my farm in Carver, cranberries growing on high, sandy land, and I send you a sample that you may see the quality. Crossing my field where corn and rye grew but a short time since, I saw cranberries growing on the hills quite thick; they must have been propagated by seed. More than a quarter of an acre was covered with vines, and they were quite full of fruit in many places, of the best kinds; it is about five years since the crop of rye was taken off. While the fruit was injured by the frost on very low meadows this year, I found it perfectly sound on my upland; not a single berry was hurt. I have informed you before, that my best fruit grew on upland, and I am confirmed in my belief this year. I picked the fruit last week; there are bushels now on my fields perfectly sound where the water never stands, and in all seasons it is perfectly dry.

SALTING PLUM TREES.

For many years I have salted my plum-trees and had large crops of fruit, but last winter I omitted to salt the trees, excepting three, and the consequence was, that I had no plums excepting on the trees that I salted, which confirms me that the only sure way to get a crop of plums, is to put salt around the trees in the winter; about four quarts is sufficient for a tree; put it around in a circle about a foot from the tree, any time in January or February will do, without regard to snow being on the ground.

POTASH WASH.

I have used it ever since my first communication in 1840, and find that if I put four ounces in two gallons of water, for young trees, or eight ounces in two gallons for old trees, that no injury is done, but a great deal of good: it removes or kills all the insects that are in the bark, and it loosens all the useless bark, destroys the moss and kills all the lice and scales. It should be done in March or April, and then scrape off the loose bark in about a week.

TRIMMING TREES.

Fall is the best time to trim trees. It removes the surplus wood that otherwise would take the sap, and heals over much quicker than at any other time. If long limbs are cut off, put on paint to keep out the wet and prevent cracking. I think the best time for trimming all kinds of trees is when the fruit is gathered. I have tried all seasons and have come to the above conclusion.

S. A. SHURTLEFF.

Spring Grove, Nonantum, Nov. 25th, 1853.

REMARKS.—The cranberries sent are high-colored and very fine. They very closely resemble those we have raised ourselves on sandy upland.

The young orchardist will not fail we hope, to notice how sparingly Dr. SHURTLEFF uses potash water as a wash for trees—*four ounces*, only, in *two gallons* of water, for young trees, and double that quantity for old trees. In careful hands we believe such a wash would not be injurious; while the *pound* and *gallon* practice is a most dangerous one.

For the New England Farmer.

WINTER EVENINGS.

Winter is rapidly hastening his rather unwelcome appearance; unwelcome, because of the gloomy aspect he gives to the fields and forests, the garden and nursery, which for months have received such a large share of our attention, and occupied so large a place in our thoughts, as we have meditated upon the sublime beauty of the vegetable world. The sun, as if unwilling to linger long on the dreary sight of earth reft of its beauty, hastily disappears behind the western hills. To all, whose business lies beneath the open sky, the hours of labor are made less, and the time for rest and pleasure and improvement increased. The mechanic in his workshop may pursue his calling, since art can supply what nature refuses, and the lawyer, doctor and minister, have long been fabled to grow wise by the use of midnight oil. But the farmer scorning to labor when nature seeks repose, quits the business of the day, with the going down of the sun, reserves the long interval between labor and rest, to be devoted to whatever pursuit inclination or fancy may dictate. His evenings are almost his only leisure time, and how to spend them, is an important question. How shall the farmer occupy the only time, in which he is busied with the cares and duties of his avocation, so that he may receive the greatest benefit, is the query which we propose to consider.

If the inquiry was, how have farmers spent their evenings, it might be easily answered. The storekeeper would perhaps tell of their nocturnal assembling at his mart of trade, to smoke "short sixes," talk politics, discuss town matters, hear the news, and engage in other equally interesting employments. The taverner might divulge what is no secret, that where the carcass is, there the eagles gather together. He might draw a picture, "founded on facts," as the novelists say, that would give farmers rather too prominent a position for their own credit. He might tell of a room, dark and dingy, filled with the fumes of rum and tobacco, loathsome in the extreme to the unpollu

ted, and intimate that some farmers spend their evenings here.

The mechanic might tell of farmers and farmers' boys who pass the closing hours of day, at his shop, growing wondrous wise, over the chess and chequer-board, and unravelling all the mysteries of cards and dice, occasionally relieving the dulness of the game by relating some obscene tale, or engaging in vulgar jest; and to this add the home picture, of yawning and dreaming and gaping for something to do, or for bed-time, and we have the whole routine of some farmers' evening employments. We would not intrude upon the sacredness of the domestic circle, but just draw the veil sufficient to discover the misspent hours of dreamy reverie, and to mark the deadening effects of idleness.

But how can the farmer, profitably, spend his evenings? To answer this question, by suggesting how they might be improved, shall be my object, and if I succeed in breaking the spell by which too many are debarred from a fruitful source of happiness, I shall receive my highest reward.

The past is a vast store-house filled with the wisdom and the folly, the virtue and the vice of generations passed away. To unlock this repository and become familiar with the recorded page, is a most fitting employment. So long as farmers are susceptible to the influences of good and evil, and capable, with "the rest of mankind," of becoming virtuous or vicious, it will be of importance that the characteristics and progress of truth and error be known, else how shall he imbibe the one, and reject the other.

To mark the progress of agricultural art and science, to learn the various means by which all strive to gain the same end—an abundant harvest—can hardly fail to interest and improve every "tiller of the soil."

In the sciences of geology and botany and chemistry and natural history, what a field is open for the farmer to traverse, and how fitting that he who lives and labors in nature's laboratory, should acquaint himself with the objects and operations with which he is surrounded. How can a portion of the long evenings be better occupied than in reading the volumes of LIEBIG and GRAY? What a change would be wrought on the face of New England, how would the repulsive assume the beauteous, if a sense and perception of the beauteous, were cultivated by studying the works of the lamented DOWNING. There are lessons of instruction on almost every subject connected with the farm, by THAER and DANA, together with a host of other kindred spirits, who are sowing broad-cast the fruits of their research and experience. Let it not be said that they "cast pearls before swine." Can anything but careless indifference or culpable neglect prevent the devotion of your leisure hours to the acquisition of that knowledge, so capable of contributing to your prosperity and usefulness and happiness?

Man alone is a recluse. Society makes the citizen, and the attrition of society wears away many a rough block, that juts out, but to disfigure the structure. It is a happy feature of the day, that association is so often made to supersede, or to co-operate with individual action. It checks the rashness and smoothes the asperities, gives union to effort, and harmony to action. There are medical societies and musical associations, teachers' institutes and missionary anniversaries, all showing how effective is united effort. Is it not time that farmers catch the spirit of progress, and seize the means of improvement, so profitably enjoyed by their brethren in other fields of labor? What a vast good would be done if an association of farmers was formed in every town. Not an association in name only, but a living, acting and working organization; with its regular meetings for discussions and lectures. It is impossible for such a society to exist long without making its mark. Dreamers will be converted into thinkers, talkers into speakers, and sensual indulgences into active intelligence. M.

Chester, N. H., Dec., 1853.

REMARKS.—Most excellent advice; we hope to see it put in practice in your own town. There are plenty of intelligent persons, and those much interested in the Great Art, directly about you, to form a *Farmers' Club*, whose operations shall be of more real value to the permanent prosperity of the town than a donation of $20,000 would be.

SPIRIT OF THE AGRICULTURAL PRESS.

SETTING FRUIT TREES.

The question has been very broadly discussed this last fall, whether autumnal or spring transplanting of fruit trees is best? The subject has been introduced into nearly all our agricultural exchanges, and we find them generally agreeing,—

1. That no tree should be set where standing water will cover its roots through a considerable portion of the winter and spring; leaving the inference that the first important operation in planting an orchard is *thorough draining* if the ground requires it.

2. That trees may be transplanted with the best success while in a state of repose; that is, from the time when the leaves have fallen, to that when the ground begins to freeze, and that if left until spring, they must be taken up before the sap is in motion.

3. That more depends upon the *manner* in which the work is done, than upon the particular season.

PROFIT OF FEEDING CORN TO HOGS.

In the *Ohio Cultivator*, an excellent agricultural journal published at Columbus, Ohio, is an article from the Ohio Agricultural Transactions for 1852, by C. C. SAMS, designed to answer the question as to how much pork a bushel of corn will make.

"It is estimated, from an experiment made by S. B. Anderson, that 100 bushels of corn will produce 1,050 lbs. of gross increase in the weight of hogs. 100 thrifty hogs were weighed and put into a pen. They were fed for 100 days as much corn as they would eat. The average consumption was 100 bushels every six days. The average gross increase per hog for the 100 days was 175 lbs., or at the rate of 1¾ lbs. per day.

It thus appears that 1 bushel of corn will produce a gross increase of 10½ lbs. Throwing off

1-5 to come at the net weight, gives 8 2-5 lbs. of pork as the product of 1 bushel of corn. If 8 2-5 lbs. of pork are made by 1 bushel, or 56 lbs. of corn, 1 lb. of pork is the product of 6⅔ lbs. of corn.

From an experiment made by Samuel Linn, of this county, with 58 hogs, as reported in the Patent Office Report for 1849, 6½ lbs. of corn produced 1 lb. of pork.

From the experiment of the Hon. H. L. Ellsworth, reported in the Patent Office Report for the year 1847, it appears that 3 4-5 lbs. of cooked meal made 1 lb. of pork. This experiment was on a small scale.

Assuming that it requires 6⅔ lbs. of corn to make 1 lb. of pork, the cost of its production will be seen from the following table. The labor of feeding and taking care of the hogs is not included in the estimates:

When corn costs 12½c ℔ bu., pork costs 1¼c. ℔ lb.
When corn costs 17c. ℔ bu., pork costs 2c. ℔ lb.
When corn costs 25c. ℔ bu., pork costs 3c. ℔ lb.
When corn costs 33c. ℔ bu., pork costs 4c. ℔ lb.
When corn costs 42c. ℔ bu., pork costs 5c. ℔ lb.

The following table shows what the farmer realizes for his corn, when sold in the form of pork:

When pork sells for 3c. ℔ lb. it brings 25c a bu. corn.
" " 4 " " 33 "
" " 5 " " 42 "
" " 6 " " 50 "

The Glory and Renown of New England.

Mrs. Bateham, who conducts the ladies department of the *Cultivator*, from which we have quoted above, has been rambling over New England during the past summer, and thinks "the days of its greatest glory and renown have seemingly passed away." We hope that it only *seems* so—that such is not really the fact. To our eye, New England never appeared brighter and more prosperous than at the present time. The New England mind was never more active, never scattered its blessings more diffusely over the world in the way of its books, its machines and manufactured articles, than at the present moment. Agriculture is certainly at a higher point than it has ever before attained, while the *Homes of New England* are probably not surpassed by any in the world, in the comforts and elegancies of life. There is a higher degree of civilization among all classes than was ever known before. The schools are not only better, but all are required to attend to the means of education; there is room in them for all, of whatever degree, and no good excuse is left for growing up in ignorance and vice. The state of religious feeling in the public mind is better, as all sects have more carefully considered the apostle's injunction to "love one another," which has greatly broken down sectarian divisions. Poetry, painting, music, with all the fine arts, and commerce and manufactures, have all been in healthy progress, while there are comparatively fewer poor, and a greater general intelligence among all; with this increase of comforts and intelligence the duration of human life has also increased. New England is so threaded with railroads, and the communication from place to place so easy, cheap, and convenient, that it has become much like one great family—we visit and see each other almost every day.

These circumstances are so favorable to physical growth and mental development, that we can annually spare from our homes enough of the sons and daughters of New England to found an "empire in the west. These are the "stars that Westward take their way," carrying with them the stern principles that well sustained them on our "shallow, rocky soil," and which will enable them, (with your assistance) to make the waste land of the West to blossom like the rose. There, Madam, does that look as though the "glory and renown" of New England had passed away? Perhaps we may be honored with a share of your next visit, and discuss the subject more fully.

Comparative Value of Different Kinds of Firewood.

The *Plough*, *Loom* and *Anvil*, gives a table showing the *comparative value of different kinds of firewood*, which is worthy the attention of all who use wood as fuel.

To those who are in the habit of using wood as a principle article of fuel, a knowledge of the relative comparative value of the various kinds in market cannot be unimportant, particularly as the consumer is thus enabled to judge of the comparative difference in each, and consequently to select the *cheapest*, or that which is offered in market at the lowest price in proportion to its relative value. For this purpose we have compiled the following table, originally prepared from careful experiments, conducted on the most correct and strictly philosophical principles. It shows the weight of a cord of different kinds of wood, when dry, or *seasoned*, and the comparative value of the same, assuming as a standard the shell-bark or white-heart hickory:

	Lbs. in a cord.	*Prop. value.*	*Comp. value.*
1. Shell-bark Hickory,	4469	$1 00	$7 40
2. Common Walnut,	4221	95	7 03
3. White Oak,	3821	81	6 09
4. White Ash,	3420	77	5 70
5. Swamp Whortleberry,	3361	75	5 55
6. Shrub Oak,	3337	74	5 47
7. Apple Tree,	3115	70	5 18
8. Red Oak,	3083	69	5 11
9. Black Oak,	3102	66	4 89
10. White Beech,	2936	65	4 81
11. Black Birch,	2815	63	4 67
12. Yellow Oak,	2818	60	4 44
13. White Elm,	2692	58	4 29
14. Maple,	2668	54	4 00
15. Buttonwood,	2449	52	3 85
16. Spanish Oak,	2391	51	3 77
17. White Birch,	2369	48	3 56
18. Pitch Pine,	1904	43	3 18
19. White Pine,	1868	42	3 11
20. Lombardy Poplar,	1774	40	2 96

Each cord of wood, when *green*, is estimated to contain 1443 lbs. of water. The farmer, then, who takes a cord of green wood to market, has a load not much less for his team than his neighbor who should put on with his cord of dry white oak, three quarters of a cord of seasoned pine, or make up his load of more than *two cords* of dry white birch. We have always considered the carting of water to market, especially over rough and heavy roads, an unwise and unprofitable business.

Agriculture in Virginia.

The *Southern Planter*, Richmond, Va., states that owing to the various instrumentalities put in operation, the Committee appointed by the State Society can report that since the annual meeting in December last, the number of members has been increased from 339 to at least 4,000! and the funds in the hands of the Treasurer from $268 to about $8,000.

In preparing for their State Show the Society expended $10,000, and with the prospect that such a large sum would prove an economical expenditure. It affords us great pleasure to notice these energetic movements in the Old Dominion.

Milk and Butter.

The Editor of *The Ploughman* says he has Devon cows and heifers that "will yield one pound of good butter, from four quarts of milk." He states that this result has been obtained "after repeated trials by himself and others, and that there can be no mistake or accidental luck in the matter."

THE MAIZE.

A NEW CORN SONG.

BY W. W. FOSDICK, OF NEW YORK.

"That precious seed into the furrow cast,
Earliest in Spring-time, crowns the harvest last."
PHŒBE CAREY.

A song for the plant of my own native West,
Where nature and freedom reside,
By plenty still crowned, and by peace ever blest,
To the corn! the green corn of her pride!
In climes of the East has the olive been sung,
And the grape been the theme of their lays,
But for thee shall a harp of the backwoods be strung,
Thou bright, ever beautiful Maize!

Afar in the forest the rude cabins rise,
And send up their pillars of smoke,
And the tops of their columns are lost in the skies,
O'er the heads of the cloud-kissing oak—
Near the skirt of the grove, where the sturdy arm swings
The axe, till the old giant sways,
And echo repeats every blow as it rings,
Shoots the green and the glorious Maize!

ere buds of the buckeye in spring are the first,
And the willow's gold hair then appears,
And snowy the cups of the dogwood that burst
By the red bud with pink tinted tears.
And striped the bowls which the poplar holds up
For the dew and the sun's yellow rays,
And brown is the pawpaw's shade-blossoming cup,
In the wood near the sun-loving Maize!

When through the dark soil the bright steel of the plow
Turns the mould from the unbroken bed,
The plowman is cheered by the finch on the bough,
And the black-bird doth follow his tread.
And idle, afar on the landscape described,
The deep lowing kine slowly graze,
And nibbling the grass on the sunny hill-side
Are the sheep, hedged away from the Maize.

With spring time, and culture, in martial array
It waves its green broad swords on high,
And fights with the gale, in a fluttering fray,
And the sunbeams which fall from the sky—
It strikes its green blades at the zephyrs at noon,
And at night at the swift flying fays,
Who ride through the darkness the beams of the moon,
Through the spears and the flags of the Maize.

When the summer is fierce still its banners are green,
Each warrior's long beard groweth red,
His Emerald-bright sword is sharp pointed and keen,
And golden his tassel-plumed head.
As a host of armed knights set a monarch at nought,
They defy the Day God to his gaze,
And revived every morn from the battle that's fought,
Fresh stand the green ranks of the Maize!

But brown comes the Autumn, and sere grows the corn,
And the woods like a rainbow are dressed,
And but for the cock, and the noon tide horn,
Old Time would be tempted to rest.
The humming bee fans off a shower of gold,
From the mullein's long rod as it sways,
And dry grow the leaves which protecting enfold
The ears of the well-ripened Maize.

At length Indian Summer, the lovely, doth come,
With its blue frosty nights, and days still,
When distantly clear sounds the waterfall's hum,
And the sun smokes ablaze on the hill.
A dim veil hangs over the landscape and flood,
And the hills are all mellowed in haze,
While Fall creeping on, like a Monk 'neath his hood,
Plucks the thick rustling wealth of the Maize.

And the heavy wains creak, to the barns large and grey,
Where the treasure securely we hold,
Housed safe from the tempest, dry sheltered away,
Our blessing more precious than gold!
And long for this manna that springs from the sod,
Shall we gratefully give HIM the praise,
The source of all bounty, our Father and God,
Who sent us from heaven the Maize!

For the New England Farmer.

COMPARISON OF PLOWS.

MR. EDITOR:—I noticed in your paper of 26th of November a difference of opinion between some of the papers, on the Michigan Plow, which leads me to make the following remarks.

I have tested the Michigan Plow with "Ruggles, Nourse & Mason's" Eagle No. 20 (which I consider one of the best single plows,) to my satisfaction, and find that two yoke of oxen will plow one acre of ground the same depth with the single plow, as easy as three yoke of oxen of the same size can with the Michigan Plow. For this extra work in plowing with the Michigan Plow, I charge one dollar per acre.

The question may be asked, why should the Michigan Plow require more strength to draw it than the single plow? I answer, because the Michigan Plow splits the furrow slice horizontally, and if the inquirer wishes for more reasons, let him take hold of a stone that has a horizontal seam in it, in order to turn it over, and when he gets it fairly on a poise let the top half of the stone slide off and by the time he gets the other half fairly on top of it, he will have a tolerable good idea why the Michigan Plow requires more team to draw it than the single plow.

Now the honest farming community like to hear both sides of the question, provided they think the first side worth hearing. Now for the benefits of the Michigan or Double Plow over the single plow.

First, in furrowing, twenty-five cents. Second, in covering, twenty-five cents. Third, plowing for hoeing first time, fifty cents. Fourth, hoeing first time, fifty cents. Fifth, plowing for hoeing second time, twenty-five cents. Sixth, hoeing second time, twenty-five cents; making in the whole two dol-

lars per acre, leaving a balance in favor of the Michigan Plow of one dollar per acre.

These are facts as near as I can state from what experience I have had on common sward land. Now how much better the crop is, I consider every farmer who tries the experiment has a right to his own opinion. But I am willing to risk my own, that it is not less than a dollar per acre, but have no authority to dispute any man if he should say it was five dollars. A. G. SHELDON.

Wilmington, Nov. 28th, 1853.

CULTURE OF WILLOW FOR OSIERS.

The attention of many persons has been turned, from time to time, to the cultivation of the Osier Willow, but with indifferent success, for the want of accurate knowledge in the pursuit. The Willow has already become an important item in the commerce of the country, as articles manufactured from it are introduced into most all of the occupations of life. Those interested in its cultivation will find an excellent essay on the subject in the transactions of the Norfolk County Society, for 1852, by JOHN FLEMING, Jr., of Sherborn, and from which some extracts will be given hereafter. The article below was prepared by CHARLES DOWNING, Esq., of Newbury, and we presume may be relied upon.

The culture of Willow, for Osiers, when its principles are well understood, is not difficult, and the profits under good management are very great. The fear that the supply may overreach the demand is not only groundless, but, on the contrary, it is susceptible of proof, that for a long time to come, the demand must increase far beyond the proportional increase of production in this country. It is but about fifty years since England received almost her entire supply from the continent. The long continued wars cut off this supply, and the deprivation was so severely felt that it became a matter of national concernment, and Premiums were awarded for the formation of Willow Plantations. Men of every degree of means, of all ranks, from the Peasant to the Lord, engaged in it, and its cultivation extended very rapidly; (the Duke of Bedford having a plantation of one thousand acres,) yet to the present time prices have not at all declined, but rather advanced. Sang, in his "Osier Plantations," in the year 1812, stating from his own knowledge, says, some good plantations have yielded, annually, for several years, a profit of £25 to £30 sterling; some as high as £40 to £45, but these very favorably situated, and tended with great care. In 1852, from reliable information from different quarters, the good plantations yield from £30 to £40 nett, and some as high as £50; American fields are equally productive, and prices in New York, Philadelpha and Boston about twenty per cent higher.

A great discouragement arose at the commencement of Willow Culture in this country, from the failure of the most vigorous growers of Europe to produce good Osiers—Viminalis, and the celebrated Longskin, of Nottingham—their most popular Osiers, are nearly worthless here, not being adapted to our climate. By one comprehensive that difficulty has been disposed of. Dr. C. W. Grant imported all the European Osiers of note, and, by careful experiment, ascertained which are suited to our climate, and also which varieties are most valuable. Among many that have proved to be good, three have been found of surpassing excellence:—

1. Triandra—It is perfectly hardy, thrives in a great variety of soils, and is as productive here as any European Willow in its own country. Its rods are long, tough, and pliable, and particularly adapted for all kinds of split work requiring those qualities.

2. Forbyana—Another very valuable one in all respects; and

3. Purpurea, or Bitter Purple Willow—valuable in all respects as an Osier, and particularly so for work that requires long, slender, unsplit wands, of great toughness. The intense bitterness of its bark and leaves renders it exempt from the attacks of beasts and insects, and consequently adapted for making live fences. Lasting fences, very ornamental and profitable, may be made of it, producing a crop of Osiers yearly. This may be characterized as the "Elegant Willow," its leaves and shoots considered; but of the three, Triandra is the most ornamental, having very showy catkins. These compose a complete assortment for basket-makers, supplying all their wants. Salix Caprea makes a tolerable Osier, and, in consequence of flowering very early, is useful for feeding bees. Its catkins make a very beautiful appearance, being very large and of brilliant colors.

To plant an acre, from ten to fifteen thousand cuttings are required; those of vigorous upland growth possess far more vital energy than those of lowland production, and make the most healthy and productive plantations. Cuttings are used from eight to fourteen inches in length; ten to twelve inches is probably the best for deep soils, and not more than eight on very retentive soils; not more than three inches should be left out of ground. They are set in rows three feet apart, and from twelve to sixteen inches distant in the rows. The first two crops will be in proportion to the number of cuttings, but after four or five years they will entirely occupy the ground, even if more than sixteen inches apart; but when the value of the early crops is considered, twelve inches will be found to be the most economical distance.

Willow will *grow in any soil*, and thrive in a great variety of soils, but gives its best returns only in such as are well suited to its habits. It is a lover of moisture, but does not tolerate standing water, or soil sodden with water nearer than within one foot of the surface during the growing season. Overflowing in winter is not objectionable, nor is overflowing from a freshet in summer, that soon passes off. A very deep, rich, sandy loam, diluvial and alluvial, such as constitutes many bottoms not so much elevated above the stream that winds through them, that by diving down in the previous soil two or three feet in midsummer, the roots cannot find moisture—if kept clear of rampant weeds, will give an astonishingly vigorous growth, yielding three or four tons per acre. The occasional overflowing that would render such of little value for crops, would be rather advantageous to willow. *Any* retentive soil rich and deeply worked—*any* clayey loam, or even heavy clay, freed from water by draining, if necessary, will give great returns as Osier fields. Deep alluvial

soil, that has not water standing on its surface, or too near it in summer, is excellent; so is drained swamp, when brought under cultivation. But here it ought to be remarked, that very different considerations should direct the choice of a cite for a Willow plantation in this country, from those which obtain in England or on the continent, where labor is very cheap and rent for land very dear, so that the price paid annually for rent and taxes for a good piece of ground, would purchase the fee simple of a piece of ground as eligible in this country. It is true that Willow can pay for draining and cultivating land that is fit for nothing else—but the inference is not legitimate—that because it is adapted for nothing else, it must be well adapted for Willow. But the contrary is generally the case, a low, level bottom, from which a crop has just been removed, if in the Spring properly prepared and planted, would on and after the second year, give a nett per centage, on investment, that nothing else can approximate, and with a certainty that pertains to no other crop.

Cuttings must be prepared in fall or winter, but to avoid being thrown out by frost, not planted till spring; if necessary, they may be kept in a cool place until last of May or June even, without much injury—but April or May is preferable time for planting, or as soon as warm growing weather is established.

Wherever it is practicable, the ground should be deeply worked; subsoiled at least, but better if trench plowed and then subsoiled. Fields that have been previously cultivated will have the advantage of easy tillage, but where the ground is soft and wet, deep and rich, simply turning over the sward with large deep furrows, and following with subsoil plow, will give perhaps as good a growth of Willow as any other preparation. The surface should be made level before setting the willow, on account of convenience in cultivation.

The entire cultivation required the first season, is such as would be given to a crop of corn, and may be chiefly done with a cultivator, on land that is so firm as to admit the travelling of a horse; but simply keeping the weeds down in ground that is too soft is often all that is required, yet great productiveness is generally inseparable from clean culture.

For the second and third years, frequent communications with some successful cultivator, whose knowledge and experience enable him to give precise directions in every stage of operation, will be very important if not indispensable; after that the plantations will be fully established and a sufficient knowledge acquired to manage the business pleasantly and successfully.

FARMERS' CLUB IN FRAMINGHAM.—At the recent annual meeting of this Society, WM. BUCKMINSTER was chosen President, ABIEL S. LEWIS and ABNER HAVEN, Jr., Vice Presidents, J. H. TEMPLE, Secretary, DAVID FISK, Treasurer.

The Trustees, one for each school district, elected on the same day, are J. W. Clark, Hollis Hastings, George Trowbridge, Willard Haven, Metcalf Pratt, W. G. Lewis, Charles Capen, Peter B. Davis, Liberty Chadwick, James Brown, Eben Stone.

The Society voted to meet on Monday evening of each week throughout the winter. Success attend their efforts.

GREEN WOOD.

It is to be hoped that there are not many New England farmers who are in the practice of using *green wood* for their cooking stoves, or for warming their rooms. The wood-house is generally as important an appendage to a New England home, as the barn, and is usually filled with seasoned wood sufficient for a year's supply. But there are some, we observe, who still use wood in its green state for fuel, hauling a load now and then, when the demand becomes imperative, and chopping just enough to appease the clamor in the kitchen.

There are several objections to such a course; first, the *moral effect* is decidedly bad, as it is a requisition upon the women much like that imposed on the Israelites of old; they were required to make bricks without straw, and you require the women to cook, and warm the children without fuel, or at least with wood that contains in every 100 pounds, 35½ pounds of *cold water*. Now it requires time, and patience, and a great stock of good humor, to puff and encourage into steam and vapor 35½ pounds of cold water, in a frosty morning, when the children are to be got to school in season, and the men are to be started for the woods. If this trial occurred only once a week, it might be supported with some degree of complacency; but it comes every day, and many times in the day, and often when care and over labor have fatigued the body and weakened the will. The mind is thus brought into an easily excited state, and gives way to words and actions unnatural to itself when not thus unjustly tried. Green fire-wood should be rejected as the demon of discord in the family; while it smokes, and steams, and sputters, and refuses to toast or roast, or bake or boil, it makes the children sulky and tart, the husband gloomy and severe, and the poor wife anxious and disheartened. Many a scene of domestic felicity has been smoked and sizzled out of existence, by the use of *green fire-wood!*

In the next place it is bad *economy* to burn green fire-wood, and to show this, conclusively, we give below a statement made by Dr. Lee, in the *Genesee Farmer*, several years ago. He says:

"We have been burning, for the last month, green black and white oak wood, cut from small trees. Our students find on analysis that 100 lbs of this wood contain 35½ lbs. of water and less than one pound of ash. We demonstrated in an article published in the last *Farmer*, that 1000 degrees of heat are taken up in converting water into steam, which occupies a space 1696 times larger than that filled by water. Although the quantity of latent heat contained in a cord of green wood is not increased by seasoning, and hence the latter can evolve no more sensible heat than the former; still, in burning green wood, or wet wood, it is almost

impossible to avoid the loss of one-fourth of the heat generated, in combination with water, in *steam* and *vapor*. Most of the heat rendered latent in these gaseous bodies passes up chimeney, where they are condensed, and give out their heat to warm all out doors.

We are anxious to give the most unscientific reader a clear idea of this subject, for it is really one of great practical importance. Look at it, then, in this light: You have divided your 100 lbs. of green oak, beech, or maple wood, into 65 lbs. of dry combustible matter, and 35 lbs. of cold water. Every pound of this water you evaporate in green wood, and *throw the heat away* by the consumption of a part of your 65 lbs. of fuel, and then take the heat evolved by the balance of your fuel to warm your room. How many ounces of perfectly dry wood are required to transform a pound of water into steam, we cannot at this moment say; nor can we determine what portion of the heat taken up by steam in the combustion of green wood is again evolved by condensing in the room where the fire is made. We believe, however, that the usual loss is about equal to one-third of all the heat contained in 65 lbs. of kiln-dried wood; and that the gain in seasoning wood under cover is at least 25 per cent."

For the New England Farmer.

HISTORY OF VEGETATION—NO. 2.

In accordance with my design at a former writing, I now purpose to follow out briefly some of the more important changes which take place in the process of vegetation, after the plant has become fully developed.

Vegetable economy—so to speak, is a subject fraught with a considerable interest; especially when we consider the close analogy there is between the vegetable and the animal kingdom. But yet how many there are of us, even, who have been "brought up in the woods," with plants for our almost constant companions, who can hardly recognize in a tree an organic thing! Nay, how many who are entirely ignorant of its internal economy, or the various "ways and means" by which it attains to its gigantic proportions. It has been said, and truly, that nature was like unto a great book, always spread out before us—always replete with instruction; yet while it is the high privilege of the farmer to be ever under her immediate guardianship, to hold daily communion with her "visible forms," of what avail is it, indeed, if her "various language" be to him, after all, a dead letter. Of what avail is it, we say, if there *are* "sermons in stones" or "books in the babbling brooks," if they are written in a language which he will not take pains to understand. We often spend years over some antiquated product of ancient lore, or conning some critic's

"——articles
On Hebraic points and the force of Greek particles,"

yet with how little zeal do we employ the means within our reach for gathering up those lessons of wisdom, written "in the stones" on the blade of grass, or in "the babbling brooks," or which are made so strikingly manifest in the history and economy of that most common product of nature—a tree. But to proceed more directly with our thesis.

First. The *bark*, like the skin of the human body, is composed of three distinct coats, the *epidermis*, the *parenchyma* and the *cortical layers*. The epidermis is the external covering of the plant; it is a thin transparent membrane, and is either *silicious* or resinous in its nature. In those plants noted for strength or hardness, the epidermis is almost entirely silicious, while in the opposite variety, it is resinous. The design in thus uniting materials of this character in the composition of the outer covering of the plant must be obvious. The hardness of the one and the resin from its want of affinity for water, in the other, preserves the plants from the destructive effects of violent rains, severe climates, or inclement seasons.

The paranchyma is immediately beneath the epidermis; it is that green rind which appears when we strip a branch from a tree or a shrub from its external covering. It also forms the green matter of the leaves and is composed of tubes filled with a peculiar juice. This juice, it may be well to say in this connexion, differs much in its nature in different species of vegetables. For instance, it is sometimes saccharine, as in the sugar-cane, sometimes resinous as in firs and evergreens, sometimes of a milky appearance, as in the laurel. In breaking a young shoot, or in bruising a leaf of laurel, we shall observe this piece to ooze out in great abundance. And it is by making incisions in the bark, that pitch, tar and turpentine, are obtained from firs and pines. And, by the way, the well known durability of this species of wood is chiefly owing to the resinous nature of its peculiar juices. With regard to the *chief* use of these juices, it is supposed that it is from these that the plant more immediately derives its nourishment.

The cortical layers are immediately in contact with the wood, and consist of small vessels through which the sap descends after having been elaborated in the leaves. The cortical layers are annually renewed, the old bark being converted into wood. Immediately beneath the cortical layers, then, is the alburnum or wood, through whose tubes the sap ascends. The wood is composed of woody-fibres, mucilage and resin. They are disposed in two ways, longitudinally and concentric. The former is called the silver-grain of the wood, and the latter the spurious grain. These last disposed in layers from the number of which the age of the tree may be computed, a new one being produced annually by the conversion of the bark into wood The oldest and most internal part of the alburnum is called *heart-wood*. It appears to be dead, at least no vital function, are discernible in it. It is through the tubes of the living alburnum that the sap rises. These, therefore, spread into the leaves and there communicate with the extremities of the cortical layers, into which they pour their contents.

Now, if we have done with the anatomy of the plant, we will treat a little more particularly upon that which constitutes its "life-current" and which amounts almost to a circulation.

First. The sap, evidently composed of water absorbed by the roots, and, like the blood in the human system, holding in solution the various principles which are to contribute to the nourishment and support of the living thing, ascends through the tubes of the alburnum into the stem, and thence branches out to every extremity of the plant, where it is elaborated by the leaves, (by which operation its super-abundant fluid is

thrown off, and itself reduced to a proper consistency to be assimilated to all its parts) it then makes its way downward through the vessels of the cortical layers, and in its progress deposits in several sets of vessels with which it communicates, materials on which the growth and nourishment of the plant depend—descending no farther and in no greater quantities than is required to nourish the several organs, so that while the sap rises and descends in the plant it does not undergo a real circulation.

The last of the organs of plants is the *flower* or *blossom*–which produces the *fruits* and *seed*. These may be considered as the ultimate purpose of nature in the vegetable kingdom. But the seed which forms the final product of the mature plant we have already examined.

These then are the principal organs of vegetation by means of which the several chemical processes which are carried on during the life of the plant are performed. R. H.H.

Burlington, Vt., 1853.

For the New England Farmer.

CHINESE MANURES.

Some time since a correspondent of the *Farmer* inquired how it is that,—while England not only imports breadstuffs, but ransacks almost the whole world for guano, bones, and other fertilizing articles to keep up the produce of her fields, and, in our own country, as a general rule, the soil deteriorates in proportion to the length of time it is cultivated,—the Chinese, without commerce and with but few domestic animals, have maintained the fertility of their soil for the successive centuries during which it has supported a wonderfully dense population?

With the hope of obtaining an answer more satisfactory than any I have found in the few books on China within my reach, I addressed a note to the Rev. Mr. Syle, of the Episcopal Mission to China, who is now on a visit to his native land, after a residence of some years in China. Believing his kind reply will prove a valuable contribution to the columns of the *Farmer*, I forward it to you for publication.

Providence, R. I., Nov. 29th, 1853.

STILMAN FLETCHER :—Dear Sir,—Many and pressing engagements have up to this time hindered me from replying to your letter of Oct. 4, in which you make certain inquiries concerning the method of manuring practised by the Chinese. I will do my best to answer your question; though, in doing so, I must beg you to bear in mind that I can only speak of what has fallen under my own observation in the city and neighborhood of Shanghai.

The most important manures there used were human ordure and urine (especially the latter) diluted with water and poured over the vegetables as they grow. It is also thrown over the rice fields as they stand partly flooded with water. In order to obtain this valuable, though not delectable manure, the country people send boats up to the city every high tide, and into these are emptied the contents of all the privies and urinals, which are to be seen all through the streets—not to mention the contents of the chamber utensils which the women bring out every afternoon, as a matter of course—every one to the back door of her own house, where it is received in larger buckets by men who come round for the purpose, and whose occupation it is to carry it off to the boats before mentioned. The public "necessaries," which stand generally in rather conspicuous situations, are quite valuable as property, and the money obtained for these *chamber products* are among the perquisites claimed by the servants of a family.

One other principal article of manure is the oil-cake which results from the compression of a small bean (grown chiefly in Shangtung). After being bruised and steamed, this bean yields a considerable quantity of oil, and the cake that remains is found quite valuable for its fertilizing properties. This also is applied as a liquid, the cake being steeped and stirred up in a good deal of water. Besides being thus used, the cake is given in small quantities as feed for cattle—that is, for the water-ox or buffalo, which is the animal employed almost exclusively in working their land. It is to the excrement of these animals that they are indebted for those compost heaps to which your letter alludes; though the Chinese also make heaps or rather pits of the mud which they draw up from the bottom of their canals, and into which they throw and pack down straw and weeds, and all kinds of garbage and corruptible matters. These after a while are spread over their fields. Ashes of wood and even of straw, are carefully preserved, and used with the most pains-taking economy—a small handful being put over the exact spot where the vegetable is expected to spring up. Even the hair which the barbers shave off the heads and chins of their customers is used as a manure, and sold for so much a pound. Boys go about the streets with baskets and little rakes, and may be seen gathering out particular sorts of dung (especially that of dogs) for particular purposes, with all the fastidiousness of epicures. Tea leaves are also counted valuable for manuring purposes.

These, as far as I can recollect, are all the articles used in the parts to which my observation has extended. It may be as well to remark, perhaps, that the plain on which Shanghai stands is one of uncommon extent and fertility, indeed, Mr. Fortune (with whose works on China you are perhaps acquainted) supposes that there is no similar extent of surface upon the face of the earth under such high cultivation—a succession of three crops—beans, wheat and cotton, is sometimes raised on the same land in one year.

As some compensation for my delay, I will send you by the first convenient opportunity, some native Chinese pictures delineating the successive stages in the raising of tea, rice, silk and cotton.

It will afford me much gratification to know that I have contributed in any degree to the dissemination of *useful* knowledge even on such an unsavory subject—adding only this one remark that the Chinese *save everything* which has a manuring value. I remain, dear sir, very truly yours,

E. W SYLE.

The "Native Chinese pictures" alluded to by Mr. Syle, are neatly done up in four volumes, of twenty-four colored paintings each. Their "perusal" has afforded me a rare treat, by the artistic

skill displayed, by the information they afford, and by the rich vein of the humorous which pervades the whole. But I must defer a particular description of these hieroglyphical delinations to a future time, in the hope of being better able to read them understandingly. S. P.

Winchester, Dec. 5, 1853.

SUPERPHOSPHATE OF LIME.

DOMESTIC MANUFACTURE.—The discussion respecting the use of superphosphate of lime still continues in many of the agricultural papers, although the real question seems to be, not whether the superphophate of lime is useful and profitable as a manure, but whether those who manufacture it, and supply the market, do "*the honest thing*," and really sell what they pretend to. We all know that animals, in order to have a full, healthy increase of bone, &c., must take into their stomachs food that contains phosphate of lime—that this food must be derived either directly or indirectly from the crops of the earth, and that these crops must derive it from the soil in which they grow, and if the soil does not contain it, whoever cultivates that soil, must supply it in some form of manuring or other.

We all know that the bones of animals, after having been formed in part of phosphate of lime, will, as matter of course, supply it again to the soil, if suitable chemical action be brought to bear upon them in such a manner as to decompose them, and liberate the several ingredients from the affinities which bind them together in the form of bone. Hence, every bone that you see kicking about by the wayside, contains valuable matter for the growing crops, and might very easily be made useful as a dressing to the soil.—But how shall this be done? We have frequently given directions how the farmer could do this, in a small way, but, as line upon line and precept upon precept is as good in farming as it is in morals, it will do our readers, we *opine*, no harm to have their attention turned to the subject again. Some very plain directions for doing the work of decomposing bones in a domestic way, were given last week in the "American Agriculturist," from which we will copy a portion, and as you may wish to refer to these directions, from time to time, it will be well to keep them in some convenient place, for the purpose of referring to them occasionally, until the process is well fixed in the mind.

TO MAKE SUPERPHOSPHATE OF LIME.—Some bones, some sulphuric acid, and some wood hooped barrels, or half hogsheads, are all the articles needed.

After placing the barrels in a convenient place, a few carboys of sulphuric acid may be obtained. These carboys hold from 120 to 180 lbs., and by stipulating to return the carboys, you can generally obtain the acid for two or three cents a pound. Put into the barrel a quantity of water, and then pour in some acid. The acid should be added by a small portion at a time, and the mixture be allowed to cool before more is added, as great heat is produced by mixing acid and water.

You want about two and a half quarts of water, for one quart of acid, although strict accuracy in this particular is not needed. Use a pitcher or earthern vessel for measuring the acid and water. You may now put in the bones; they would be better to be crushed or broken up; and you may put in as many as you can punch down into the liquid. As they settle down you can add more from time to time. Let this stand from six to twelve weeks, stirring it with a stick from time to time, and you will have a liquid superposphate of lime, as good as can be made.

When you wish to apply it to the land, pour out the liquid, leaving the undissolved bones still in the barrel, and mix the liquid with some unleached ashes,—say two quarts of ashes to a gallon of the liquid, and then mix the whole thoroughly with a large quantity of dry manure, or even with any dry soil, and it is ready to be sown upon the field broad cast, or put in the hills with the seed. If put in direct contact with the seed, be sure to have it well mixed with a large quantity of muck or other substances, say two or three gallons to a cartload. This mixing can be done with a shovel on the floor or ground.

Improved superphosphate of lime is made by adding something that contains a large quantity of ammonia, and in order to make it of yours, as prepared above, omit adding any ashes, but add more or less urine, or liquid from the manure heap, and then dry with muck as before directed.

After pouring out the liquid superphosphate from the barrel, you can add more water, acid and bones, and let the process go on anew. The article is just as good or even better after it has stood one or five years. Should the hoops chance to burst off, pour the liquid into another vessel, or set it on the top of another, and let it thro into it by pushing out the bottom.—*Maine mer.*

CHARCOAL—ITS ALIMENTARY CHARACTER.

Some farmers are disposed to ridicule the idea that in the simple and hitherto disregarded article of charcoal, the agriculturist possesses an assistant of great and surprising energy. Yet such is the fact, indubitably, unless all science is to regarded as a mere house of cards, built up but to be thrown down again. But it is not for the purpose of defending it against the cavilling and carping spirit of such as deny its claims to the character of a manurial agent, that we now take up the pen, but rather to present a few isolated facts in reference to its capacity of acting in some cases, and under certainly modified, and somewhat peculiar circumstances, as a substitute for the food of animals, instead of as an aliment of plants. The incidents or facts given below in illustration of the truth of the position suggested, are from the most reliable sources, and may be depended on as strictly and rigorously correct.

Many years since, while one of the Liverpool traders was fitting out in the port of New York, a pig was missing from on board, and was supposed to be lost. After taking in her cargo, the vessel put to sea. A few days after, it was found that the pig supposed to have been lost, was in the coal-pen, but as the location of the latter rendered approach somewhat difficult, it was conclud-

ed to leave the animal to his fate. At the termination of the voyage his pig-ship was not only found to be alive and well, but very considerably improved in condition, though with the exception of charcoal, there was nothing within his reach which he could have swallowed from the commencement to the conclusion of the voyage—a period of nearly thirty days.

"A family being driven from the city of New York by the fever, were absent six or eight weeks before it was deemed prudent to return. A number of fowls confined in the loft of a work-shop, were forgotten at the time of leaving, and as it was known that there was nothing provided for their subsistence, it was expected on their return that they would be found starved to death. To the astonishment of all, the fowls were found alive and fat, though there was nothing upon which they could have fed, except a quantity of charcoal and shavings; water being supplied from the grindstone trough."

The following experiment was made by a gentleman of New York, to whom the foregoing facts were communicated by a friend.

"He placed a turkey in a box or enclosure, four feet long, two feet wide, and three or four feet high, excluded light as much as could be done, and allowed a free circulation of air, and fed the turkey with soft brick broken fine, pounded charcoal, and *six* grains of corn per day The box was kept locked. At the end of the month, the turkey was killed in the presence of several gentlemen, was large and heavy, and on being opened was found filled with fat. Nothing, on dissection was found in the gizzard and entrails but charcoal and brick. Last winter the experiment was repeated, and with the same success."

A late writer on this subject says:—"When it is remembered that wood, sugar, and several other substances, some of which are most nutritive, are compounded of nearly the same original elements, it would seem possible, by animal chemistry, to convert them to the purpose of sustaining animal life; though all experiments with wood or charcoal have failed."

MANAGEMENT OF POULTRY.

Farmers may gather some useful information upon the subject from the following extract from an English paper:—

Poultry House.—The floor should be cleaned at any rate once a week. It should be sprinkled with sawdust, ashes, peat, or, best of all, peat charcoal. The nests should be lined with moss, heath, or short straw; neither long straw nor hay should be used—the darkest nests are preferred by the hens. A poultry yard should contain: 1. A grass plot; 2. Fine gravel; 3. Slaked lime or other calcareous matter; 4. Ashes kept dry by being placed under cover; 5. Pure water. Eggs: Hens of the best variety will lay in a season from 160 to 210 each, or an average of 185, which, at the rate of even 11d. (22 cts.) per score, will realize 9s. 10d. ($2,40) per hen. Breed: Evidently the best are the Dorking, and "fowls which have black legs are the best for roasting, while those with white legs are the best for boiling." For laying, the Dutch every-day layers or the Spanish are excellent. Sitting: Having observed that the earliest chicks in the neighborhood were every year in possession of the same person, we were induced to ascertain the cause. We found that the eggs were not taken from the nest, and as soon as she had about 13 she commenced to sit. Fowls, indeed, in their native haunts, never lay more eggs in a season than they can hatch. Those who keep Dutch every-day layers, or the Spanish hen, should keep three or four Dorking hens to do the hatching business. Remember that no success can be expected from poultry keeping—1st. If their houses be damp, cold, unclean or badly ventilated; 2d. If the food they eat does not closely approximate to that which they get in a state of nature, viz.: a mixture of vegetable and animal food; 3d. If the water they drink be stagnant, the drainage of the manure heaps, &c.; 4th. If the strongest and handsomest be not bred from.

For the New England Farmer.

DOUBLE PLOW.

Mr. Editor:—I have just read in your paper of this date, a letter from that genuine Yankee farmer, Mr. S., of Wilmington. His remarks always indicate careful observation and sterling common sense. When he says that it takes *one-third* more power to operate the double plow, splitting the furrow slice into two parts, say one three inches thick, and the other five—than it does to turn a furrow slice of the same width and depth, with a single plow—his remark is not in accordance with my observation. I have tried the same experiment with considerable care, and came to the conclusion that the double plows required no additional power.

In proof of this, a dynamometer was applied to both, and the power estimated in several consecutive furrows, and the best opinion that could be formed at the time, was, that the double plow went the easier of the two. I cannot perceive the force of the illustration drawn from friend S.'s *split stone*—though I freely admit he knows much better about handling stone, than I do. With the other propositions in his letter, I fully accord. Observations from such men, drawn from the farm itself, are what are wanted for instruction. I am glad that *the farmer* of Wilmington has taken hold of this *double plow*. He has long since shown the public how to grow the best orchard in his county; I hope he will continue to use his plow, until he points out the way to improve the average of the crops of Indian corn, throughout the county, from 35 to 50 bushels to the acre—as I am confident can readily be done, with proper attention.

Dec. 10, 1853.

Remarks.—In another column, we have given some remarks on the same subject from the *Country Gentleman*. The double plow is gaining friends, and it is important that it should be well understood.

EXTRACTS, REPLIES, &C.

EGGS AND BUTTER.

D. G. HITCHCOCK, Augusta, Ga., inquires:—"What is the best method of preserving eggs? How should butter be put up to keep it sweet? and what will restore it to its natural taste when it has become strong or rancid?"

Eggs packed in fine salt, always with the small end down, will keep in this climate, for several months, sweet and sound. We have kept them for half a year without perceiving the least change in their flavor, by packing them tightly in a cask, and pouring over them lime water, about the consistency of whitewash, or a little thinner. The lime water acts upon the shells, so that if they are immersed several months, the shells will be found somewhat thinner than when put in.

Butter made properly is very easily preserved. The cream should be churned *while it is sweet*, the buttermilk thoroughly *worked* out,—not *washed* out with cold water,—about an ounce of salt applied to a pound, packed away in the tub closely, and kept as much as possible from the air. This is the whole operation of making and keeping good butter. It is not the pure butter, which is an oil, that becomes rancid, but the buttermilk that is with it. We have seen a statement from a French paper, that the bad taste and smell of butter may be entirely removed by working it over in water mixed with chloride of lime. The discovery was made by a Brussels farmer whose practice has been to take a sufficient quantity of water to work it in, and put in it from 25 to 30 drops of chloride of lime for every 10 pounds of butter. When it has been worked until the whole has been brought into contact with the water, it should be worked again in pure water, when it will be found sweet. This plan may easily be tested, and we should think it worth while for those dealing in butter to try it.

THE YELLOW LOCUST.

Information is desired as to the best method of cultivating the Yellow Locust. (*a.*) How is the seed to be prepared, where to obtain it, and price; (*b.*) the proper season for planting,—how deep and how far distant for *Forest wood?* If you or any of your correspondents will answer the above questions you will obigle many

Windsor, Vt., Dec. 3, 1853. A SUBSCRIBER.

REMARKS.—(*a.*) The seeds of the *Yellow Locust* should be sown in a rich, free loam, an inch or two apart every way, and covered with light soil from a quarter to half an inch deep. The seeds may be sown in the autumn or spring, and under favorable circumstances, the plants will be from 2 ft. to 4 ft. high the following autumn; the largest may then be removed to where they are to remain, and the others transplanted into nursery lines. If the seeds are not sown in the autumn it would be better to keep them in the pods until spring, but in a dry state.

(*b.*) CORBETT recommends steeping the seeds in hot water, but we should not approve it. If it is particularly desired to sow the seed at a late day in the spring, in order to save one season, it would be well to steep the seeds for a few hours in warm water just before sowing. The seeds may be obtained at Ruggles, Nourse & Masons, at a price ranging from 50 to 75 cents a pound. We will refer to the subject again, and speak of the locust more at length.

For the New England Farmer.

COAL ASHES.

Increased attention is now being accorded to this article as a manure. Men of science have ascertained that it possesses intrinsic value, and practical farmers are testing the correctness of scientific dedutions, by experiment. The editor of the Germantown *Telegraph*—T. R. FREAS, Esq., says:

"It is our opinion that these ashes are more or less valuable as a manure, according to the character of the soil to which they are applied. To hard land, and an unfriable soil, or where clay predominates, we believe anthracite coal ashes will prove of much value, as our limited experience would confirm, having used the ashes as a manure, for ten or twelve years, in a limited degree, and firmly believe it to possess nutritious properties, to a desirable extent."

Professor Norton, whose position in the scientific world entitles his opinions to high respect, expresses himself in much the same way, and at the late scientific convention, Mr. J. B. Bunce, a chemist attached to the Yale Laboratory, presented a communication on the subject of the soluble ingredients of anthracite coal ashes, and the applicability of the latter to manurial purposes. Mr. Bunce finds that water "dissolves between 3 and 4 per cent. of both red and white ashes, while acid from 17 to 18¾ per cent. The soluble matters consist principally of alumina, iron, lime, and magnesia; but their is also some soda and some potash—together, from 1.8 to 3.3 per cent.—nearly 2 per cent. of phosphoric acid, and from 3 to eight per cent. of sulphuric acid."

The presence of these acids, in connection with the alkalies, the lime and magnesia, give a value to these ashes, and in the opinion of Mr. Bunce, "would justify their extensive use for agricultural purposes." H. D. W.

FLUCTUATIONS IN FLOUR.—The *Baltimore American* contains an interesting table on the fluctuations in the wholesale price of flour in the three first months of the year from 1706 to the present time. In March, 1706, the price was $15 per barrel; in Jan., 1800, $11 per barrel; in March, 1805, $13; during the war 1812-15 the highest price paid was $11; in 1817, $14,25 was paid; in March, 1821 it was as low as $3,75; from that time to 1828 it did not go above $7; in 1829 it was as high as $8,50; the next year as low as $4,50; in 1837, $11, (the time of the flour riots in New York); in 1838-9, $8; in 1841 it was down to $4,50; in 1843 to $3,87; in 1844, $4,25; in 1845, $4; and from that time to the present did not go above $6 in the months named. In the early part of 1853, flour was as low as $5,25 per barrel; now it is much higher.

GRAPE VINES—BEARING AND PRUNING.

Many of our people are now supplied, until the first or middle of January, with delicious Isabella, or other Grapes, raised on their own premises, without the aid of artificial heat, or of any unusual care, or expense. In favorable spots, by the sides of buildings, we believe the Isabella will ripen every year, and when once trained there, and properly cared for, it will remain in a thrifty and bearing condition for many years.

The grape loves a moist soil, but not one where water stands in it. An excellent spot is near the back door of the house, where it will be convenient to throw sink water or suds from the wash tubs, several times a week.

The proper time for pruning is in the autumn, soon after the fall of the leaf, and in this operation very much depends, as to the success you may meet with. We give herewith, from Cole's Fruit Book, some of the different forms of training.

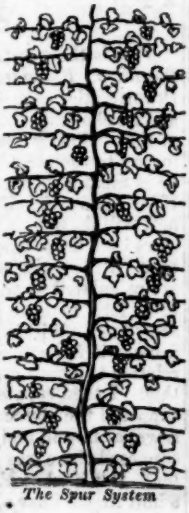
The Cane, or Renewal System.—The first season one branch is trained up; in the fall this is cut back to 3 or 4 eyes, and the next season another is trained up, and the first is extended; both are then laid down and trained horizontally, near the surface; and from each a cane is trained up, (*a. a.*) The next season these will bear fruit, and two more canes, (*b, b,*) trained up to bear fruit the next season, when *a, a* are cut out near the horizontal branch, leaving one eye, and new shoots trained, and so on. Dr. W. C. Chandler, of South Natick, Ms., trains in this way, and he has sent us fine Isabellas an inch in diameter. Some train up the main vine perpendicularly on a building, to a convenient place, and then extend canes horizontally, and renew as above. The cane system gives excellent fruit, as it is always on new wood; but the yield is generally larger by spur or fan training. The canes should be as much as 2 feet apart. If the vine is strong, the horizontal branches may be extended, so as to have 8 or 10 canes.

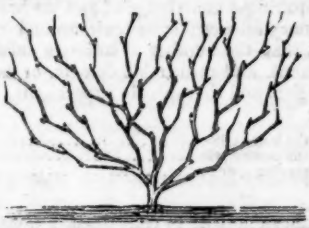
The Cane System.

The Spur System is the training up of the main stem, and of spurs horizontally, cutting back the spurs, annually, to 2, 3, or 4 eyes of the new wood, according to the strength of the vine, and number of the spurs.

When the spurs have extended too far, cut out a part, yearly, training up new ones, thus changing all the wood to new; and as the vines become old and unproductive, cut down part at a time, and train up new ones. This will combine the cane and spur method, and is an excellent system.

The Fan or Tree System, or other convenient modes, are practised in vineyards, and in common garden culture, or in training grapes in yards, by walls, trees, buildings, &c. In gardens or vineyards, a trellis may be formed by setting posts, or stakes 6 or 8 feet high, and nailing on narrow strips of boards, or stakes alone are sufficient, if set 15 or 20 inches apart. In vineyards, where the vines are about 3 or 4 feet apart, sometimes only one stake is set to a vine, and the lateral or oblique branches are trained to the neighboring stakes.


The Spur System



Pruning of grapes is not generally well understood. Some do not prune at all the proper season; they have a mass of vines and only a little fruit, and that poor. Another absurdity, which is often added to the above, is cutting off the young shoots in summer, just above the fruit, and sometimes still worse, picking off the leaves to expose the fruit to the sun.

The sap ascends to the leaves, and there mingles with matter, absorbed by the foliage, then it is digested, or elaborated into food, which descends to nourish the plant. So essential are the leaves, that the blight on the foliage destroys the fruit, and a frequent repetition is death to the plant. The leaves, not the fruit, should be exposed to the sun. We urge this point, as thousands mistake, and grapes are generally mismanaged.

As pruning the vine young prevents the growth of the roots, but little should be done for a year or two after it is set. In Nov., or early in Dec., all vines in open culture should be pruned liberally. If pruning in spring, before leaved out, they will bleed; they may bleed in spring if pruned in winter. In pruning rather tender vines, leave more wood than is needed, as some may be killed, and finish pruning in spring as soon as the leaves are nearly developed, when the life of the vine may be seen. In summer allow a good growth beyond the fruit, and about midsummer, pinch off the ends of the branches, to check them, and cut out feeble laterials, and branches on which there is no fruit; then there will be much foliage to absorb the matter, and prepare nutriment; and by checking the growth of wood, it will be appropriated to perfect the fruit. The two great errors are in neglecting to cut off useless wood in fall, and in depriving the plant of useful foliage by close pruning in summer.

Careful use of Horses.—An acquaintance lost his horse a few days ago, in a manner that would suggest an habitual caution in driving. The horse, a valuable one, well kept, in good spirits, and in perfect health, was taken from the stable and driven. He had ascended a long and hard hill within the first mile of driving, and as soon as the summit was reached, the driver, as is the habit of many, touched him with the whip; he sprang, stopped, staggered and fell, and by the time the driver could alight from the carriage, he was dead. An examination showed that a large blood-vessel near the heart had been ruptured.—*Farmer and Planter.*

For the New England Farmer.

REPORT

OF THE TRANSACTIONS AT THE VETERINARY SCHOOL OF ALFORT.

BY GEORGE H. DADD, VETERINARY SURGEON.

During the last sessional year, students at this valuable institution have had rare opportunities for acquiring a knowledge of various branches, in veterinary science; from their annual report we learn, that the number of animals admitted for treatment, and returnable defects, or as subjects of surgical and therapeutic experiment, are as follows:

Of the horse tribe	1041
Of the bovine tribe	22
Of smaller species	383
	1446

Animals submitted to consultation were,—

Horses	6510
Cows	33
Asses and Mules	80
Dogs	397
Goats	17
Cats	4
Pigs	3
	7044

Making in the aggregate 8490 animals over which the students have extended their observations.

"If we add to this the number returned the previous scholastic year, 7994, it will be seen that the pupils receiving their diplomas, after having spent two years at school, have had opportunities of instruction in veterinary medicines and surgery from the considerable number of 16,484 subjects of different species."

We sincerely hope that ere the year 1853 has passed, to be able to report on the transactions of an *American veterinary school!* Such institution is surely needed; for the people of this country are now in the same condition regarding veterinary matters, as existed among those of the mother country previous to the endowment of her veterinary university. And if ever we should be visited by those fearful epidemics, or epizootics, that have to such an alarming extent prevailed throughout the British dominions, the pestilental sword will be no less keen, nor destructive here, than it was in the former country. But we have enough at the *present* time to arouse our agriculturists from their long slumber of indifference to united action for the advancement of a science, which has, and is still calculated to sow broadcast the germs of usefulness. It is well known that there are constantly occurring among various descriptions of live stock, thousands of premature deaths, and a like number of unnecessary cases of disease, every year, which might be prevented by the aid of veterinary science. Many of our farmers have, to their sorrw and mortification, discovered that the offspring of many fine and costly animals rapidly degenerate, and they know not the why nor the wherefore. Then, again, observe the countless number of malformed, and otherwise defective horses that are to be met with, in all parts of the Union; inheriting through ancestral descent a broken down constitution, a weak, porous, bony structure, which sends out its morbid growths, in the form of spavin, ringbone, splent and other osseous deformities; to the utter ruin of the subject's reputation, and his owner's anticipations.

Does the farmer seek a remedy? If so he should read the *Book of Nature*, as it is written by Omnipotence on the face of universal creation, and recognize there through the intelligence of man, in germination, growth and maturity of both animate and inanimate matter. Let the farmer who is thirsting for knowledge, knock at the door of veterinary science, and it shall be opened unto him, and he shall there learn by what means races of animals degenerate. It has been discovered, and the same is true of brutes, that malformation, decrepitude and premature death result from disregarding the immutable laws of nature. Ask the surgeon how and by what means the sons of *Adam* deteriorate, and he will tell you they *have violated* God's uncompromising laws, as they apply to our mental and physical natures. Do you desire proof of this? If so, you are referred to the Nobles of Spain and Portugal—to the lunatics of this, and other conntries, and to the countless hosts of weak, puny, living—yet half dead—of all nations, that are to be met with—the architects of their own infirmities. If other and more convincing proof be needed, we have only to contrast the stalwart frame and iron constitution of our departed ancestors with the present exotic and diminutive race, and the difference appears almost as great as that now existing between the *lion* and the *lamb*. Hence there is a fine field for American talent and industry, in that branch of veterinary science known as comparative physiology. Finally, if it were not for the enterprise manifested by our wealthy agriculturists, in importing stock from abroad, and thus mingling *good blood* with the common herd, the live stock of this country would be little else than walking skeletons, fit subjects only for some friendly epizootic. Let a small portion of the money, now expended for the purchase of foreign stock, be invested in standard works on the collateral branches of veterinary science, to be studied in our schools and universities; and a little sum be appropriated for endowing a school like that at Alfort, then our native stock might be so improved and perpetuated as not to need foreign aid.

For the New England Farmer.

A POUND OF BUTTER TO A GALLON OF MILK.

This is the question. The veteran Editor of the *Mass. Ploughman* says he has a stock of Devon cattle, each and all of which will do this; and he challenges the world to show the contrary of this. This is toeing the mark. This is coming up to the scratch boldly. Mr. B. knows what he is talking about, and understands what he says. If his cows and heifers, be they Devon, or what not, will do this, it is more than any other set of cows ever have done, in this or any other country. If they will not do this, then his statements are calculated to mislead. Mr. B. must know it to be folly to make such statements, unless they are true. Within three months, it has been avowed in his editorial columns, speaking then in relation to Jersey cows, that no animal would do this. I then supposed what he said was true. I supposed the statements made about the Jersey cows, at Lowell and Dracut, were not true. I supposed there was some *gum-game* in this matter. But if what Mr. B. now says is true,—I admit that I have done injustice to the Jersey

cows, on the Merrimack. The richest produce that I have ever known from a cow, and she was the best cow I ever knew, was *one pound of butter to one and a quarter gallons of milk*, taken from the cow, under circumstances most favorable.

I do not say, Mr. Editor, that what Mr. B. says of his Devon stock is not true,—but I do say, that I will find the man, able and willing to purchase as many animals as he will bring on, that will yield a pound of butter to every *five quarts* of their milk, at any time within *four months* of their calving;—and pay therefor, double the fair market price for such cows.

This is not vain-boasting—but is an offer made in good faith. Come, friend, will you stand your hand?

Dec. 15, 1853. ESSEX.

DRY FOOD.

There are numerous disadvantages necessarily attending the feeding of neat stock exclusively on dry food. Horses, oxen—and in short, all domestic animals—fed on cut hay in a dry state, obstinately refuse, after a time, to consume all that is given them. They become fastidious, and consequently less healthy and thrifty in condition than when fed partly on moist or succulent food.

The process which experience has demonstrated to be the most judicious and economical, and, at the same time, the best adapted to promote the several objects contemplated by the feeder is the following:—

A trough, or other suitable vessel of sufficient capacity, is to be provided, and into which a sufficiency of cut oat, rye, or wheat straw, stalks or hay, is to be put, to furnish all the animals with a single meal. For every *three* animals to be fed, add four quarts of meal with just enough water to moisten it, and let it stand for several hours, or if practicable, till incipient fermentation has commenced, and a slight acidity is perceptible. In this state feed it to your animals, and you will find that not a particle will be refused by them, and that they will continue in better condition than when fed exclusively on any other feed. If desirable, the process of preparing the food may be further systematized by having several troughs for mixing the ingredients. This will enable the feeder to prepare food in advance of his wants, and consequently to have a feed always ready at the hour it is wanted. A straw-cutter of the latest and most improved pattern, should be found on every farm. It will enable the husbandman to work up, to good advantage, a large amount of material that would otherwise possess no actual value except for manure. By cutting corn stalks, tops and butts, fine, mixing with them a quantity of roots or apples chopt into small pieces, or raspt with a rasping machine, and scattering over them a very small quantity of meal of any kind, together with a little salt, a very palatable and nutritious food will be secured, and one on which most animals will winter as well as upon the best English hay.

Pumpkins and squashes, as well as roots and apples, are often prepared and mixed with refuse fodder in this way.

But—as we believe, the true way of preparing feed for farm stock of all kinds is not yet practised in the country. We believe the time will come when *steam* may be used, so that after paying the interest of the cost of the fixtures and fuel, a saving of nearly or quite *one-fourth* of all the hay, roots and grain may be made, and that the farmer may have that surplus over and above what he now has, to sell. Who, among our enterprising farmers, will commence the experiment?

THE RAT AND THE WEASEL.

My informant states that a farmer in the State of Maine of his acquaintance, had noticed at different times for the period of two weeks, combats between a large rat and a weasel in his barn; from which encounters the latter invariably came off second best. One day, being at work near his barn, his attention was attracted to the weasel very busily engaged in digging a hole in a dung heap. He watched the weasel until he had "tunnelled" the heap; and made a hole of considerable size at the entrance and about half way through the heap; the rest of the hole was tapered off, so that at the place of egress it was of barely sufficient size for the slim little body of the weasel to pass through. When the plotter had finished his hole, he went into the barn and engaged his antagonist ratship. Beaten, of course, again in the encounter, the weasel ran, pursued by the rat, into the hole of the dung-hill, the grain-eater little suspicious of the snare laid for him. Like many unfortunate human beings, the poor rat was "stuck," and halted sadly between the two extremes; while his cunning little foe emerged from the small end, and whipping round briskly to the larger entrance, "brought up the rear," and that was soon a dead rat. Here now was a regular plan laid, a shrewd design carried out successfully on the part of the weasel for destroying a foe which was too much for him in a fair fight. It showed forethought and contrivance, and these are very strong symptoms of something more than mere instinct,—reason.—*Valley Farmer.*

THE MICHIGAN DOUBLE PLOW.

We perceive that the *New England Farmer*, in consequence of too brief an explanation on our part, has entirely misunderstood our remarks in relation to the team required for this plow. Our experience in this matter gives precisely the same results as those found by the *New England Farmer*, with the exception, perhaps, that we think decidedly less draught required than for a common plow *cutting the same width and depth.*

A Michigan plow of a size corresponding with a common plow, will cut a furrow one-half deeper, or as three is to two, and consequently must run harder than the latter. For plowing nine or ten inches deep, two yoke of oxen or two pair of common horses are required; for one foot in depth,

the largest size Michigan plow is needed, and must be drawn by three yoke of oxen.

For a given depth, we are satisfied the Michigan plow requires the least draught in consequence of the inverted slice being composed of two distinct portions, which are more easily turned and thrown where they are to lie, than one thick, stiff, and unmanageable sod. At the same time the work is done in a far better manner, especially when the plowing is quite deep, and quite so to do the work well with a single mouldboard.—*Country Gentleman.*

THE OLD WASHERWOMAN.

FROM THE GERMAN CHAMISSO.

Behold her busy with her linen,
Yon ancient dame, with silver hair,
The briskest of the washerwomen,
Though six-and-seventy years are there;
So she has followed, year by year,
The honest toil at which you find her,
Filling with diligence the sphere
Of useful labor God assigned her.

In her young days, (for she is human,)
She loved, and hoped, and wedded too;
Well has she known the lot of woman,
Seen cares and sorrows not a few.
Her dear sick man she sought to save,
(Three children faithfully she bore him,)
Nor did she bury in the grave
Her faith and hope, when earth closed o'er him.

The precious charge now laid upon her
With cheerful energy she bore;
She trained them up in fear and honor,
Virtue and prudence all her store.
At length, to seek their livelihood,
They took her blessing and departed;
A lone old woman now she stood,
Yet cheerful, hopeful and stout-hearted.

She spared, and scraped, and saved each penny,
And spun by night the flax she bought,
And of fine flax thread yards full many
At last she to the weaver brought.
He wove her linen white as snow;
Her needle and her scissors plying,
A spotless burial dress she so
Prepared against her day of dying.

Her dress—her burial dress—with pleasure
And sacred pride she lays away;
It is her first, and last, her treasure—
The fruit of many a toilsome day.
She puts it on God's Word to hear,
When Sabbath bells sound holy warning,
Then lays it up again, to wear
The night before the eternal morning.

And would that I, when night shall find me,
Might read, in life's last sinking sun,
That I had wrought the work assigned me,
As this good dame her task has done;
That I had learned life's joys to drink
In such full and even measure,
And could upon my grave-clothes think,
At last with such a heart felt pleasure.

AGRICULTURE AND THE "MESSAGE."—We cannot but express our surprise, and sincere regret, that the President, in his recent Message, entirely overlooked the most important interest of the nation—that of Agriculture. This great pursuit underlies and sustains all others, and yet, in this document, deliberately written and pretending to touch upon all the leading interests of the people, no allusion whatever is made to it. We find it stated, that, "taking the last census as the basis of calculation, there are at this time about *six hundred millions dollars* worth of live stock in the United States. Their value exceeds that *of all the manufacturing establishments in the country*, and also, *exceeds the capital employed in commerce, both inland and foreign.* And yet Agriculture is not acknowledged as having existence in our pursuits.

WHEN SHOULD TIMBER BE CUT.

EDITOR OHIO FARMER:—What is the proper season for cutting timber, to ensure its greatest durability, is a question of considerable importance to the farmer, in a country where it is an object to save timber and avoid unnecessary labor, as it makes a great difference in the profits of a farmer if his fences have to be renewed once in five years, when by cutting his timber in a proper season they would last ten.

The time settled on by tradition appears to be the month of February. Perhaps the reason is, the winter in the most convenient season for doing such work, there being more leisure time then than in summer; and because it has been generally done at that time, it is supposed to be the right one. But if any one will be at the trouble of cutting a tree in the winter or spring, and one in June or July, and making them into rails, and then see which will last longest, he will not need any other argument to convince him that tradition is at fault in this case at least.

Perhaps the case may be different with some kinds of timber; but hickory, ash, basswood, beech, and maple, and some other kinds, cut in the winter, when the bark is tight to the wood, and the sap in the heart of the tree, becomes sap-rotten and worm-eaten before they have time to season, and fall to pieces in a short time; while that which is cut in summer, the bark being loose, and the sap near the surface, can easily be peeled; when it dries immediately, and becomes as hard as a bone, and will no doubt last from one-third to one-half longer than the former. Trees can be cut down in summer, and left with the tops on, to be worked up at leisure with very good advantage.

Bedford, O., 1853. E. J. YOUNG.
—*Ohio Farmer.*

MR. GREELEY'S ADDRESS.

We have received from the publishers, Messrs. Fowlers & Wells, New York, a neat pamphlet of 33 pages, containing the address of HORACE GREELEY, before the Indiana State Agricultural Society, at its annual fair, Oct. 13, 1853.

The address is entitled, "What the Sister Arts teach as to Farming," and its object is "to set forth some of the principles which underlie the whole fabric of productive art and industry, and to show their application to the farmer's vocation as well as others." This it does in a clear, forcible and consistent manner, showing that farming, like all other productive arts, is not independent of general rules, and that the principles which it is

necessary to observe, in order to be successful in other vocations, are of equal importance to the tiller of the soil. Paying but little attention to the peculiar operations of the farm, the address inculcates the principles of thoroughness, and a perfect mastery of the pursuit of agriculture, partially and theoretically. Mr. Greeley closes his address with an eloquent appeal to the "general experience, and the heart of humanity," in favor of the "calm perennial joys of a humble rural home." We commend the address to all, as filled with good thoughts and valuable suggestions, and we are sure that no one will rise from its perusal without feeling in his heart a new and more earnest longing for the "serene joy which shall irradiate the farmer's vocation, when a fuller and truer education shall have refined and chastened his animal cravings, and when science shall have endowed him with her treasures, redeeming labor from drudgery, while quadrupling its efficiency, and crowning with beauty and plenty our bounteous, beneficent earth."

PIGS AND DOGS.

[Mr. Willis, in one of his recent Idlewild letters, says:]

In my daily rides, of late, I had thought my neighbors' dogs rather more filibusterous than usual, and I was wondering whether it was owing to the frost-sieve which I was allowing kind Dame Nature to spread protectingly over my upper lip, when a friend gave me the key to their excitability. This is the hog-killing season; and it appears, that with the scent of blood in the air, the farmers' dogs became annually furious. They bark at all comers, even those with whom they are well acquainted, and in their assaults upon the passers-by, they quite forget their usual polite distinction between beggars and gentlemen. Pig influence, even after death, is thus hostile to good manners. One cannot "kill his own pork," and have also a well-behaved dog. And I must own that I am pleased with discovering a new reproach to the animal—for it is one of the obstinacies about which I am most reasoned with, by my household advisers, that I cannot consent to keep a pig. "There's an unrighteous amount of swill wasted," as my man eloquently expresses himself—"twenty dollars a year in good sweet pork that you know all about." But, satisfactory as it may be to eat pork with which one has been previously acquainted in the shape of swill, my abhorrence outweighs both the economy and the pleasure. If it were nothing else, the *voice* of the brute is doom enough for him. ("Oft in the stilly night," etc.) And as one must remember daily, every creature of which one is bound, as the master of a home, to be mercifully mindful, I will have a home without a pig—if my own taste and my dog's better manners are arguments that continue to prevail.

☞ Monroe D. Randall, district school teacher of Belchertown, has been ordered to pay $10 and costs—amounting to about $30, for inflicting excessive punishment on a female pupil. He appealed.

For the New England Farmer.

THE MONTHLY FARMER FOR DECEMBER.

This number completes the volume and the year. This is as it should be. A periodical should no more end in April or October, than Thanksgiving or Christmas come in dogdays. These long evenings, too, are just the times for holding family councils on the subject of taking the *Farmer* another year, for, as Young says, "Night strikes thought home;" and farmers are obliged to think over their expenses pretty carefully. But until Agricultural Colleges, Lecturers, or something else, shall take the place of agricultural papers, we do not see how we are to get along without the *Farmer*. But this is wandering from our text. Let us glance at the contents of the number for December.

A MODEL FARM.

Although Congresses and Legislatures may neglect to establish in our country any thing like the "Model Farms" of Europe, that so take the fancy of some agricultural writers and speakers, still we are not left entirely without models. Scattered all over the land, unpretending as worth, and retiring as modesty, are yet to be found, thank heaven, thousands of model farms and model farmers, of the true American stamp. "How to secure a home and be Independent" places one of these models before us. When young men cease to imitate, and older ones to admire, such examples as the history of Mr. Srow affords, and look to the legislature for their "models," the "decline and fall" of our empire will begin, and very much where that of the Roman did.

BIRDS.

No. 7 of Mr. FOWLER'S series of articles on the "Birds of New England," which treats of the Swallow tribe.

CALIFORNIA.

The land of gold promises to become a land of farmers. Messrs. Byrant & Co., on page 573, speak of the agricultural capabilities of the country, while "California Matters" give some of the premiums offered there on agricultural productions; and "Gold against Hay" is a sensible article,—but what's the use of talking? Though a California outfit may cost more than a farm in Iowa, and every ounce of gold dust twice its market value, and the lives of half the miners, yet thousands must and will "see the folly of it for themselves."

COWS.

A likeness and statement of the cow that took the first premium at the Middlesex County show.

FAIRS.

Brief notice of agricultural fairs in Cheshire County, N. H.; full account of the National Horse Exhibition, where the receipts were $10,000; of the Augusta, Georgia, Show; of the Hampshire County Exhibition; with names of officers of the Rockingham, and of the Hillsborough, N. H. Societies for 1854.

FRUIT.

If "J. T. W." who makes inquiries about grafting pears on the Mountain Ash, has not the monthly *Farmer* for May, I should advise him to obtain it, and read an article by Mr. GOODRICH, on page 224, and a few lines on page 204, before he

lay out much labor on the Mountain Ash, unless he intends to *sell* his pears "two years from the bud." Other valuable articles on "Gathering and Preserving Pears;" caution against selecting varieties for cultivation from specimens exhibited at "Exhibitions of Fruit;" "Remarks on Transplanting Trees," and notice of a new seedling "Frost-Proof Grape."

GARDEN.

The editor gives us some Autumnal reflections in "The Garden," with hints on work there for the season; "A short Garden Chat" on peaches, peas, and beans; and "The product of an acre and a quarter," in Canada.

IMPLEMENTS.

An editorial on "Agricultural Implements;" a cut and description of a "One-horse Farm Tilt-cart;" with an article on "Agricultural Machinery," which says, "though thousands of very ingenious men have labored for years to improve the plow, still the best now in use consume five-sixths of the moving force to overcome friction and cohesion."

MANURES.

In a report of the proceedings of a late meeting of the Board of Agriculture I am glad to notice the appointment of a committee on the waste of fertilizing substances in cities, and from the names of the committee, think we may believe the matter will not end in the "*Resolve*" by which they were appointed. We find also a "Table of Manures," giving the composition, mode of application, weight, &c., of several special manures; remarks on "Bones and Sulphuric Acid;" "A New Manure;" and the "Meadow Mud" controversy, continued; in which the editor says "many things are recommended to the farmer that are altogether unattainable by the great mass of cultivators; and many courses or plans proposed that can only be adopted by a few." How true; and yet this idea has subjected his remarks to the criticisms of the *Tribune* and of "Glen." No wonder there is prejudice against book-farming! I was brought up among farmers that had hard work to get salt for their pork, where lime enough to plaster the "square room" could not be had by all, and where an oyster shell would have been placed in the cabinet of curiosities on the mantel piece.

PIGS AND TURNIPS.

Thoughts, suggestions and facts on feeding pigs on turnips. Though not much of a turnipite myself I can wish all manner of success for Mr. FRENCH in his experiments. One country raises turnips with a profit; another sugar beets; and a third, Indian corn—but this does not prove that either country can succeed with all these articles. When Cobbett went back to England he attempted to get up a corn fever among the farmers there, but with as little success among practical men, as the turnip advocates have thus far met with in the United States.

REMEDIES,

For "Borers," for "Warts on Cows;" for "Lice on Cows;" and for "Burns."

SCIENCE.

When government shall take the business of agriculture into its hands, as it has done that of education, and be able to place the graduates of "Farm Schools" into lucrative places, as it does those of Normal schools, then will Mr. GOLDSBURY'S argument be to the point, and the "Agricultural Lectures proposed by H. S." can be delivered by those "having authority." "Science as a co-worker" with the farmer is recommended by Mr. PERRY. He says, "It cannot be possible that agriculture alone, of all the arts, must stand aloof from the aid offered by science. All other industrial occupations owe their elevation and importance to it." Now is it not a fact that agriculture supports two periodicals devoted to its interests, where the other "industrial occupations" support one—pays for two volumes on the "application of science," where they pay for one? Shoemakers and masons, wheelwrights and tailors, may be far ahead of farmers, in science, but I have no proof of it.

TITLE PAGE AND INDEX.

The printer gives us a neat title-page, and the editors a copious index of subjects, illustrations, and correspondents for the volume. From which it appears that some *two hundred and forty* different individuals have contributed more or less of their thoughts or knowledge, during the year; that some 47 cuts or pictures have illustrated its pages, and that the mere names of subjects fill up nine columns. It may be that there are some readers who will throw aside this index with the feelings of the lady who remarked of Dr. Johnson's Dictionary, "though the language is magnificent, I don't think much of the story," yet the great majority will agree with Daniel Webster in his estimate of the value of an index, when he said "I never look at a book that has none."

SHEEP.

Nine particular, and a good many general reasons for preferring "Merino sheep for mutton" and other purposes.

WHEAT.

Several encouraging instances of success in raising wheat in New England, the past season, are mentioned in this number. A READER.

Winchester, Dec., 1853.

THE FINEST OX IN THE WORLD.

An ox, acknowledged by all who have seen him to be the most extraordinary one they have ever heard of, is about to be forwarded to the Smithfield Cattle Show, from Sir H. Verney's, of Claydon House. He was bred and fed by the Hon. Baronet, and is a pure short-horn. He is rather over five years old, and is supposed to be much heavier than the famous Durham ox, about which so much noise was made at the beginning of the present century, or than the American ox, which some few years since attracted so much notice. He stands nearly 18 hands high, and measures 6 ft. 6 in. from hip to shoulder, 3 ft. across the hips, 9 ft. 11 in. in girth behind the shoulder, and 12 ft. in length from the tip of the nose to the rump, while his depth from chin to brisket exceeds 4 ft. 6 in. He is exceedingly well made up, particularly along the whole length of his back; and notwithstanding his great size, presents none of those monstrous fatty excrescences which so generally disfigured the highly-fed beasts, and were so generally condemned a few years since. He has been fed upon grass, cake and corn; and is supposed by various judges, who have courteously been permitted by Mr. Fraser, Sir H. Verney's steward, to

visit him to weigh upwards of 300 stone. Notwithstanding his great weight, he is exceedingly active, is very tractable, and is a capital feeder; indeed, Mr. Fraser does not hesitate to express his belief that the animal could stand feeding for another year. In color he is a light roan, with white predominating, and is altogether a very handsome, quiet beast, with a kind head and docile eye.—*Bucks (Eng.) Chron.*

Advertising Department.

University of Albany.

DEPARTMENT OF CHEMISTRY.

E. S. CARR, M. D., Professor of Chemistry and its applications to Agriculture and the Useful Arts.

F. E. DAKIN, Instructor in Analytical Chemistry.

This department of the University, having been permanently established, a spacious Laboratory will be opened for the reception of Students, on Tuesday, the 10th day of January next. There will be a Course of Instruction in Practical and Analytical Chemistry, and a Course of Lectures on the applications of Chemistry to Agriculture and the Manufacturing Arts, continuing during a term of three months. The Laboratory will be open from 9 A. M. to 4 P. M.

The Lectures will be delivered in the evening, and will be free of charge.

For Laboratory Instruction, $20 per term, or $10 per month, for a shorter period. Students will be charged with breakage and the Chemicals they consume. Students will also have access to the State Agricultural and Geological collections.

Analysis of Soils, Ores, Mineral Waters, &c., made on reasonable terms.

Address Prof. E. S. CARR, at Albany, or either of the following gentlemen: LUTHER TUCKER, office Albany Cultivator; Hon. B. P. JOHNSON, State Agricultural Rooms; Dr. J. H. ARMSBY, 669 Broadway.

Dec. 17, 1853. 4w.

U. S. and Foreign Patent Agency,

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SAMUEL COOPER,

LATE Chief Examiner in the U. S. Patent Office, procures Patents in this and Foreign Countries.

REFERENCES.

The undersigned, Principal and Assistant Examiners in the United States Patent Office, have for several years been well acquainted with Mr. Samuel Cooper, lately a Principal Examiner in this Office, and take pleasure in stating that he is a gentleman of the highest moral character, of unquestioned knowledge in the business and practice of the Office, and that his scientific attainments are such as eminently fit him for the business in which he is about to engage.

HENRY B. RENWICK, L. D. GALE, J. H. LANE, } Principal Examiners.

T. R. PEALE, THOS. H. EVERETT, F. SOUTHGATE SMITH, WM. CHAUNCY LANGDON, } Assistant Examiners.

From long acquaintance and intimate official relations with Mr. Cooper, I fully and heartily concur in the foregoing recommendation made by my late colleagues.

WM. P. N. FITZGERALD,
Late Principal Examiner of Patents.

Dec. 31. tf

Super-Phosphate of Lime,

IN bags and barrels, made by C. B. DEBURG, a warranted pure and genuine article, with full directions for use. For sale by GEO. DEVENPORT, 5 Commercial, corner of Chatham St., Boston, agent for the manufacturer.

Also, for sale, Ground Bone, Bone Dust, Burnt Guano, and Grass Seeds of reliable quality.

March 26, 1853. tf

For Sale,

The Hungarian Bull and Cow, belonging to the estate of the late Hon. Daniel Webster; also a full blooded Alderney Bull. To be seen on the premises.

Jan. 7, 1854. tf

Ground Bone.

THE attention of the Scientific Agriculturists and others, is invited to a new article of ground bone. Bone manure has long been known to be the most fertilizing article in use, not excepting even guano, but there has always existed a difficulty in pulverizing it at a cheap rate in manure, that it will speedily and powerfully operate on the soil. That difficulty has at length been overcome, and the article is now offered in its pure and most efficient state, ground to any desired fineness, and at the same time retaining all its ammonical and gelatinous matter, constituting the fertilizing qualities, which causes this manure to be so superior to all others; and another consideration in its favor is, that it can be furnished to order fresh ground, retaining all its virtue, at a very short notice, and at a reasonable rate. All orders addressed to the subscriber will meet with prompt attention, and all necessary information furnished by

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No. 6 South Market Street

Jan. 7, 1854. 3mos

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"Rollo on the Atlantic,"

BEAUTIFULLY ILLUSTRATED WITH ORIGINAL DESIGNS.

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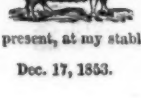

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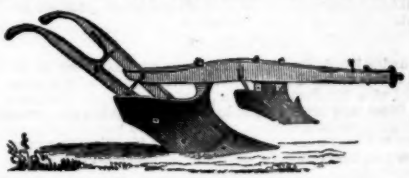

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